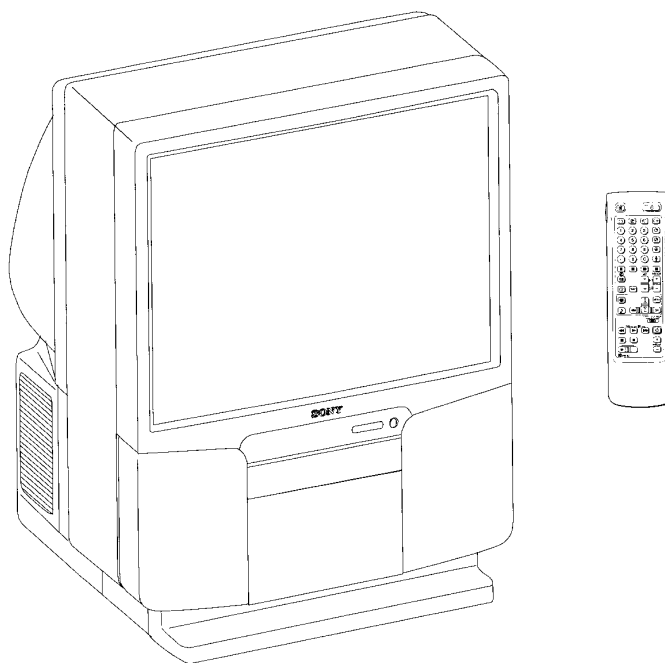


SERVICE MANUAL

AP-1E CHASSIS

DEL	COMMANDER	DEST.	CHASSIS NO.
P-S4111K	RM-831	OIRT	SCC-H55A-A
P-S4112U	RM-831	UK	SCC-H54A-A
P-S4113	RM-831	AEP	SCC-H08B-A



TRINITRON® COLOUR TV
SONY®

ITEM MODEL	Television system	Stereo system	Channel coverage	Color system
OIRT	B/G/H, D/K	GERMAN Stereo	PAL B/G/H: E2-E12, E21-E69 CABLE TV (1): S1-S41 CABLE TV (2): S01-S05, M01-10, U1-U10 ITALIA: A, B, C, D, E, F, G, H, H1, H2, H21-H69 SECAM D/K: R01-R12, R21-R60	PAL/SECAM NTSC3.58, NTSC4.43 (VIDEO IN)
UK	I	NICAM Stereo	UHF: B21-B69	PAL/SECAM NTSC3.58, NTSC4.43 (VIDEO IN)
AEP	B/G/H, D/K, L, I	GERMAN/NICAM Stereo	PAL B/G/H: E2-E12, E21-E69 CABLE TV (1): S1-S41 CABLE TV (2): S01-S05, M01-10, U1-U10 ITALIA: A, B, C, D, E, F, G, H, H1, H2, H21-H69 SECAM D/K: R01-R12, R21-R60 SECAM L: F2-F10, F21-F69 PAL I: B21-B68	PAL/SECAM NTSC3.58, NTSC4.43 (VIDEO IN)

MODEL	OIRT	UK	AEP
Power consumption	188W	268W	188W

Specifications

Projected picture size Approx. 103 cm (41 inches)

Input/Output Terminals

[REAR]

- ➔ 1 21-pin Euro connector (CENELEC standard)
 - Inputs for audio and video signals
 - inputs for RGB
 - outputs of TV video and audio signals
 - ➔ 2/➔ 2 21-pin Euro connector
 - inputs for audio and video signals
 - inputs for S video
 - outputs for audio and video signals (selectable)
 - ➔ 4/➔ 4 21-pin Euro connector
 - inputs for audio and video signals
 - inputs for S video
 - outputs for audio and video signals (monitor out)
 - ➔ 2, ➔ 4 S video inputs
 - 4 pin DIN
 - ➔ Audio inputs (L, R) -phono jacks
 - ➔ S video output - 4-pin DIN
 - ➔ Audio outputs - phono jacks
 - ➔ Audio outputs (variable) - phono jacks
- External speaker terminals: 2-pin DIN

[FRONT]

- ➔ 3 Video input - phono jack
 - ➔ Audio input - phono jacks
 - ➔ 3 S video input 4 - pin DIN
 - ➔ Headphone jack: Stereo minijack
- Sound output 2x30W (Music power)
- Power requirements 220 - 240V
- Dimensions (incl. speakers) Approx. 925 x 1209 x 509 mm
- Weight (incl. speakers) Approx. 65 kg
- Supplied accessories RM-831 Remote Commander (1)
IEC designation R6 battery (1)
- Other features Digital comb filter (High resolution)
PIP (Picture-in picture)
NICAM
FASTTEXT

[RM-831]



- Remote control system infrared control
- Power requirements 1.5V dc
1 battery IEC designation R6 (size AA)
- Dimensions Approx. 65 x 225 x 21 mm (w/h/d)
- Weight Approx. 157g (Not including Batteries)

Design and specifications are subject to change without notice.

Model name Item	KP-S4111K	KP-S4112U	KP-S4113
Pal Comb	ON	ON	ON
PiP	ON	ON	ON
RGB Priority	ON	ON	ON
Woofer box	OFF	OFF	OFF
NICAM	OFF	ON	ON
Scart 1	ON	ON	ON
Scart 2	ON	ON	ON
Front in (3)	ON	ON	ON
Scart 4	ON	ON	ON
Dyn. Convergence	OFF	OFF	OFF
Projector	ON	ON	ON
AKB in 16:9 mode	ON	ON	ON
Norm B/G/H	ON	OFF	ON
Norm I	OFF	ON	ON
Norm D/K	ON	OFF	ON
Norm AUS	OFF	OFF	OFF
Norm L	OFF	OFF	ON
Norm SAT	OFF	OFF	OFF
Norm M	OFF	OFF	OFF
Language Preset	OIRT	English	Deutsch

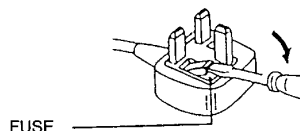
WARNING KP-S4112U only

A moulded plug complying with BS 1363 is fitted to this equipment for your safety and convenience.

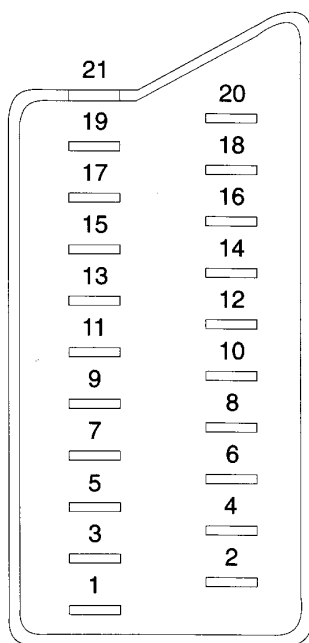
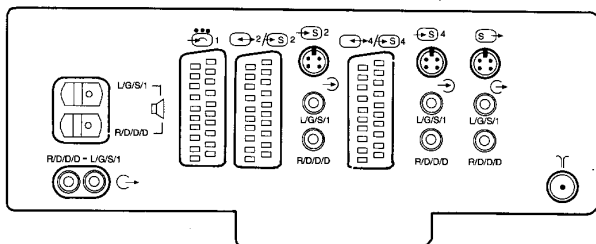
Should the fuse in the plug supplied need to be replaced, a 5 AMP fuse approved by ASTA or BSI to BS 1362 (i.e. marked with  or ) must be used.

When an alternative type of plug is used it should be fitted with a 5 AMP FUSE at the distribution board.

If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sonv service station.



21 pin connector (— 1 2 / 3 4)



Pin No	1	2	Signal	Signal level
1	○	○	Audio output B (right)	Standard level: 0.5Vrms Output impedance: less than 1kohm*
2	○	○	Audio input B (right)	Standard level: 0.5Vrms Input impedance: More than 10kohms*
3	○	○	Audio output A (left)	Standard level: 0.5Vrms Output impedance: less than 1kohm*
4	○	○	Ground (audio)	
5	○	○	Ground (blue)	
6	○	○	Audio input A (left)	Standard level: 0.5Vrms Input impedance: More than 10kohms*
7	○	●	Blue input	0.7V±3dB, 75ohms, positive
8	○	○	Function select (AV control)	High state (9.5—12V): Part mode Low state (0—2V): TV mode Input impedance: More than 10kohms Input capacitance: Less than 2nF
9	○	○	Ground (green)	
10	○	○	Open	
11	○	●	Green	Green signal: 0.7V±3dB. 75ohms, positive
12	○	○	Open	
13	○	○	Ground (red)	
14	○	○	Ground (blanking)	
15	○	—	Red input	0.7V±3dB, 75ohms, positive
	—	○	(S signal) chroma input	0.3V±3dB, 75ohms, positive
16	○	●	Blanking input (Ys signal)	High state (1—3V) Low state (0—0.4V) Input impedance: 75ohms
17	○	○	Ground (video output)	
18	○	○	Ground (video input)	
19	○	○	Video output	1V±3dB, 75ohms, positive Sync: 0.3V(—3, +10dB)
20	○	—	Video input	1V±3dB, 75ohms, positive Sync: 0.3V(—3, +10dB)
	—	○	Video Input/Y (S signal)	1V±3dB, 75ohms, positive Sync: 0.3V(—3, +10dB)
21	○	○	Common ground (plug, shield)	

○ connected

● unconnected (open)

* At 20 Hz—20kHz

4 pin connector (— 3)

Pin No	Signal	Signal level
1	Ground (audio)	
2	Ground (blue)	
3	Y (S signal) input	1V±3dB, 75ohms, positive Sync: 0.3V(—3, +10dB)
4	C (S signal) input	0.3V±3dB, 75ohms, positive

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CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS. THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.


ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÂSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÂSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

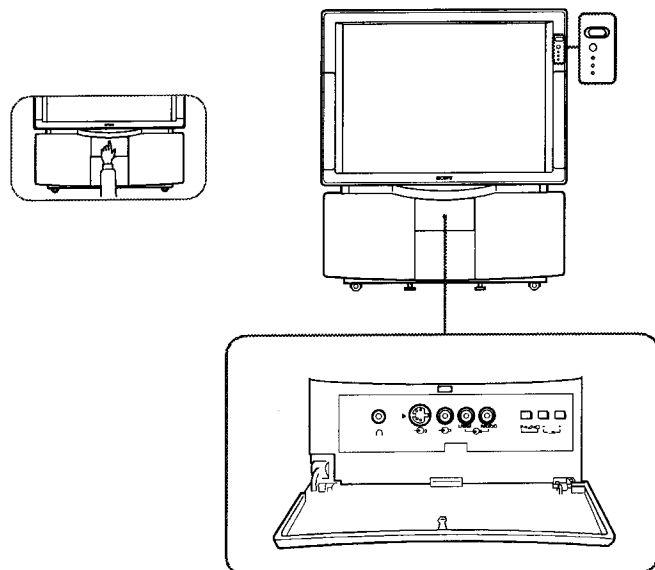
LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET PAR UNE MARQUE  SUR LES VUES EXPLOSÉES ET LES LISTES DE PIÈCES SONT D'UNE IMPORTANCE CRITIQUE PUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÈCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

Overview

SECTION 1 GENERAL

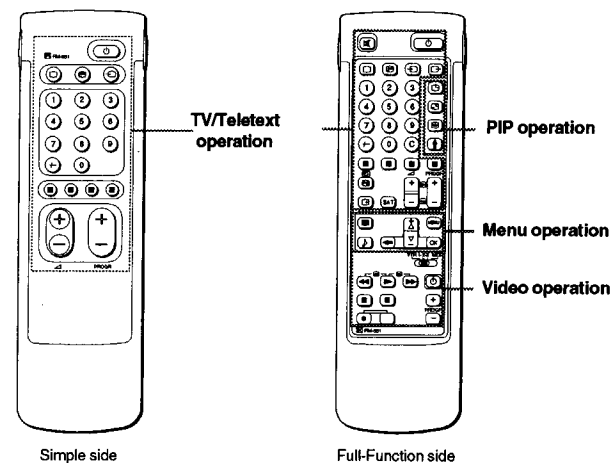
This section briefly describes the buttons and controls on the TV set and on the Remote Commander. For more information, refer to the pages given next to each description.

TV set-front



Symbol	Name	Refer to page
Ⓚ	Main power switch	14
Ⓛ	Standby indicator	14
A-Ⓚ-B	Stereo A/B NICAM indicators	17
Ⓛ	Headphones jack	23
Ⓛ 3, Ⓛ 3, Ⓛ 3	Input jacks (S video/video/audio)	23
Ⓛ	Function selector (Programme/volume/input)	14
+/+	Adjustment buttons for function selector	14

Remote commander RM-831



Note
The SAT. button does not operate with this TV.

TV/Teletext operation

Symbol	Name	Refer to page
Ⓚ	Mute on/off button	15
Ⓛ	Standby button	14
Ⓚ	TV power on/TV mode selector button	14
Ⓛ	Teletext button	15
Ⓛ	Input mode selector	15
Ⓛ	Output mode selector	24
1,2,3,4,5,6,7,8,9,and 0	Number buttons	14
-/-	Double-digit entering button	14
C	Direct channel entering button	11
Δ+/-	Volume control button	14
PROGR +/-	Programme selectors	14
Ⓛ	Teletext page access buttons	19
Ⓛ	Picture adjustment button	16
Ⓛ	Sound adjustment button	16
Ⓛ	On-screen display button	15
Ⓛ	Teletext hold button	19
Ⓛ	Time display button	15
■■■■	Fastext buttons	19

PIP (Picture-in-picture) operation

Symbol	Name	Refer to page
Ⓛ	PIP on/off button	18
↑	PIP source selector	18
Ⓛ	Swap button	18
Ⓛ	PIP position changing button	18

Menu operation

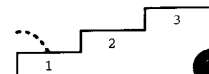
Symbol	Name	Refer to page
MENU	Menu on/off button	8
Δ+/-	Select buttons	8
OK	OK(confirming)button	8
←	Back button	8

Video operation

Symbol	Name	Refer to page
VTR1/2/3, MDP	Video equipment selector	25
Ⓛ	Video equipment operation buttons	25
PROGR +/-		

Getting Started

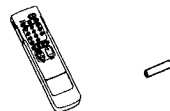
Step 1 Preparation



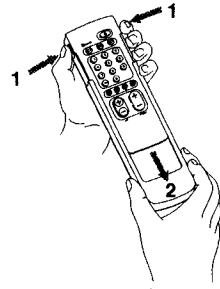
1 Check the supplied accessories

When you've taken everything out of the carton, check that you have these items:

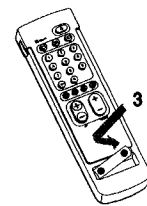
- RM-831 Remote Commander
- One IEC designation R6 battery



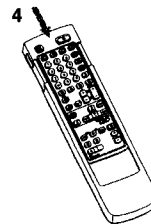
2 Insert the battery into the Remote Commander



Remove the cover.

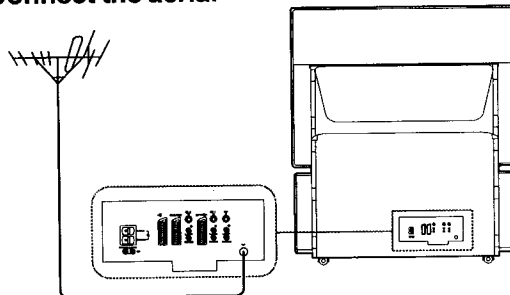


Check the correct polarities.



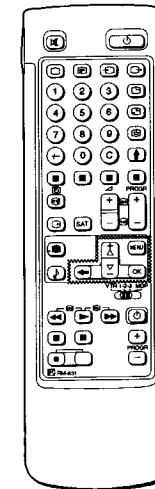
Refit the outside cover making sure that the Full-Function side is visible to use the menu in Step 2.

3 Connect the aerial



Fit an IEC aerial connector attached to 75-ohm coaxial cable (not supplied) to the T socket at the rear of the TV.

Step 2 Adjusting Colour Registration (Convergence)



Once you have set up the TV, you can choose the language of the menu. Then you should converge the three colour layers (red, green, and blue).

Before you begin

- Check that the Full-Function side of the Remote Commander is visible.
- Locate Menu operation buttons on the Remote commander. They are shaded in the illustration at the left.

1 Choose a language

- 1 Depress \odot on the TV.
The TV will switch on. If the standby indicator on the TV is lit, press \odot or a number button on the Remote Commander.
- 2 Press MENU.
The LANGUAGE menu appears. (See Fig. 1)
- 3 Select the language you want with Δ + or ∇ - and press OK.



Fig. 1



2 Display the Menu

- 3 Press the \leftarrow button.
The main menu appears. (See Fig. 2)



Fig. 2

3 Converge the red, green, and blue lines

- 1 Select "Convergence" with Δ + or ∇ - and press OK.
The convergence menu appears. (See Fig. 3)
- 2 Select "the line" you want to adjust with Δ + or ∇ -.
Key to line adjustment symbols:
I (red vertical - left/right adjustment)
- (red horizontal - up/down adjustment)
I (blue vertical - left/right adjustment)
- (blue horizontal - up/down adjustment)
- 3 Press OK.
The line to adjust is selected.
- 4 Press Δ + or ∇ - to converge the selected line with the centre green line and press OK.



Fig. 3

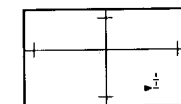
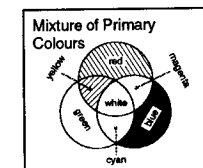


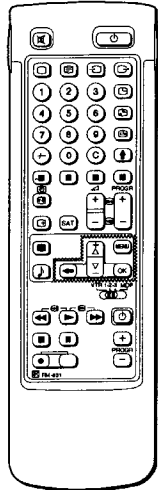
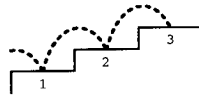
Fig. 4

To move up (horizontal line)	Press Δ +
To move right (vertical line)	Press Δ +
To move down (horizontal line)	Press ∇ -
To move left (vertical line)	Press ∇ -

- 5 Repeat steps 2-4 to adjust the other lines, until all the lines have overlapped to form a white cross. (See Fig. 4.)
- 6 Press MENU to return to TV picture.



Step 3 Tuning in to TV Stations



To go back to the main menu
Keep pressing **←**.

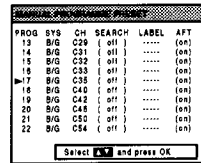
To stop automatic
channel presetting
Press **←** on the Remote
Commander.

Notes

• After presetting the channels automatically, you can check which channels are stored on which programme positions. For details, see "Using the Programme Table" on page 17.

• You can sort the programme positions to have them appear on screen in the order you like. For details, see "Sorting the Programme Positions" on page 11.

You can preset the channels (up to 100 channels) by choosing either the automatic or manual method. The automatic method is easier if you want to preset all receivable channels at once. Use the manual method if you only have a few channels and want to preset channels one by one. The manual method is also convenient for allocating programme numbers to various video input sources.



Preset channels automatically

- Press **MENU** to display the main menu.
- Select "Preset" with **△** or **▽** and press **OK**.
The PRESET menu appears. (See Fig. 5.)
- Select "Auto Programme" with **△** or **▽** and press **OK**.
The AUTO PROGRAMME menu appears. (See Fig. 6.)
- Press **OK**. Select if necessary the TV broadcast system with **△** or **▽** and press **OK**. (B/G for western European countries, D/K for eastern European countries, L for France and I for the United Kingdom). The first element of the "PROG" number will be displayed in red on a black background.
- Select the programme (number button) from which you want to start presetting. Select the first element of the double-digit number with **△** or **▽** or the number buttons (e.g. For "17", select "1") and press **OK**.
The second element of "PROG" will be displayed in red on a black background.
- Select the second element of the double-digit number with **△** or **▽** or the number buttons (e.g. For "17", select "7") and press **OK**. (See Fig. 7.)
- Using **△** or **▽**, select **C** to start presetting from the normal channels) or **S** (to start presetting from the cable channels) and press **OK**.
The automatic channel presetting starts.
When presetting is finished, the preset menu reappears. (See Fig. 8.). All available channels are now stored on successive number buttons.
If you want to change to another broadcasting system, repeat 3-6.
- Press **MENU** to return to TV picture.

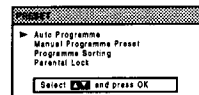


Fig. 5



Fig. 6

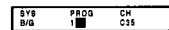


Fig. 7



Fig. 8

Use this method if there are only a few channels in your area to preset or if you want to preset channels one by one. You may also allocate programme numbers to various video input sources.

If you have made a mistake

Press **←** to go back to the previous position.

To return to the main menu
Keep pressing **←**.

To tune in a channel by frequency
After selecting **F** in step 6, enter three digits using the number buttons.

Preset channels manually

- Press **MENU** to display the main menu.
- Select "Preset" with **△** or **▽** and press **OK**.
The PRESET menu appears. (See Fig. 9.)
- Select "Manual Programme Preset" with **△** or **▽** and press **OK**.
The MANUAL PROGRAMME PRESET menu appears. (See Fig. 10.)
- Using **△** or **▽**, select the programme position (number button) to which you want to preset a channel, and press **OK**.
- Select, if necessary, the TV broadcast system (B/G for western European countries, D/K for eastern European countries, L for France and I for the United Kingdom) or a video input source (EXT) with **△** or **▽**.
Then press **OK**. The CH position will be displayed in red on a black background. (See Fig. 11.)
- Using **△** or **▽**, select **C** (to preset a regular channel), **S** (to preset a cable channel), or **F** (to tune in by frequency) and press **OK**.
The first element of the "CH" number will be displayed in red on a black background.
If you have selected **EXT** in step 4, select the video input source with **△** or **▽**. (See Fig. 12.)
There are two ways to preset channels. If you know the channel number, go to step "7-Manual".
or
If you don't know the channel number, go to step "8-Search"
- Manual**
 - Select the first element of the "CH" number with **△** or **▽** or the number buttons and press **OK**.
The second element of the "CH" number will be displayed in red on a black background.
 - Select the second element of the number with **△** or **▽** or the number buttons.
The selected number appears. (See Fig. 13.)
 - Press **OK**.
The "SEARCH" position is highlighted and the selected channel is now stored. (See Fig. 14.)
 - Press **OK** until the cursor appears by the next programme position.
 - Repeat steps 3 to 7 to preset other channels.
- Search**
 - Press **OK** repeatedly until the colour of the SEARCH position changes.
 - Start searching for the channel with **△** (up) or **▽** (down).
The CH position changes colour. (See Fig. 15.)
The CH number starts counting up or downwards. When a channel is found, it stops. (See Fig. 16.)
 - Press **OK** if you want to store this channel. If not, press **△** or **▽** to continue channel searching.
 - Press **OK** until the cursor appears by the next programme position.
 - Repeat steps 3 to 7 to preset other channels.
 - Press **MENU** to return to TV picture.

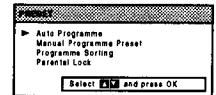


Fig. 9

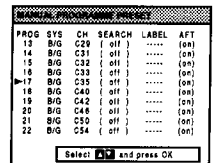


Fig. 10

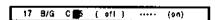


Fig. 11

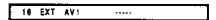


Fig. 12

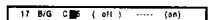


Fig. 13

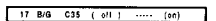


Fig. 14

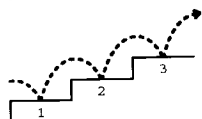


Fig. 15



Fig. 16

Additional Presetting Functions



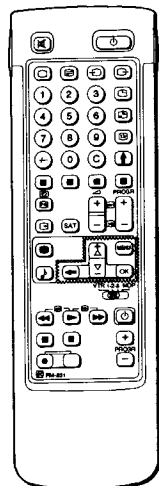
This section shows you additional presetting functions such as sorting or skipping programme positions, captioning a station name, manual fine-tuning, and using the parental lock.

You can skip this section, if not needed.

Before you begin

- Check that the Full Function side of the Remote Commander is visible.
- Locate the Menu operation buttons.

PROGRAMME SORTING



Sorting Programme Positions

With this function, you can exchange the programme positions to a preferable order.

- Press MENU to display the main menu.
- Select "Preset" with Δ or ∇ and press OK. The PRESET menu appears.
- Select "Programme Sorting" with Δ or ∇ and press OK. The PROGRAMME SORTING menu appears. (See Fig. 17.)
- Using Δ or ∇ , select the programme position you want to move to another and press OK. The colour of the selected position changes. (See Fig. 18.)
- Using Δ or ∇ , select the programme position to which you want to move the channel of the programme position selected in step 4 and press OK. Now the two programme positions have been sorted. (See Fig. 19.)
- Repeat steps 4 and 5 to sort other programme positions.
- Press MENU to return to TV picture.

PROG	CH	LABEL	PROG	CH	LABEL
1	C07	BBC2	9	C02	---
2	C14	ITV	10	C02	---
3	---	---	11	C02	---
4	---	---	12	C03	---
5	---	---	13	---	---
6	---	---	14	---	---
7	C08	C4	15	---	---
8	C15	BBC1	16	---	---

Fig. 17

8	C15	BBC1	16	---	---
---	-----	------	----	-----	-----

Fig. 18

PROG	CH	LABEL	PROG	CH	LABEL
1	C15	BBC1	9	C02	---
2	C07	BBC2	10	C02	---
3	C14	ITV	11	C02	---
4	---	---	12	C03	---
5	---	---	13	---	---
6	---	---	14	---	---
7	---	C4	15	---	---
8	C08	BBC1	16	---	---

Fig. 19

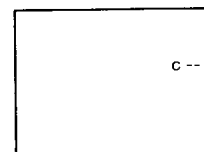


Fig. 20

Tuning in to a Channel Temporarily

You can tune in to a channel temporarily, even when it has not been preset. Use the buttons on the Full-Function side of the Remote Commander.

- Press C on the Remote Commander. The indication "C" appears on the screen. (See Fig. 20.)
- Enter the double-digit channel number using the number buttons (e.g. for channel 4, first press 0, then 4). The channel appears. However, the channel will not be stored.

For programme positions beyond 15
The display scrolls automatically.

If you have made a mistake
Press \leftarrow to go back to the previous position
To go back to main menu
Keep pressing \leftarrow .

MANUAL PROGRAMME PRESET

Skipping Programme Positions

You can skip unused programme positions when selecting programmes with the PROGR +/- buttons. However, the skipped programmes may still be called up when you use the number buttons.

- Press MENU to display the main menu.
- Select "Preset" with Δ or ∇ and press OK. The PRESET menu appears.
- Select "Manual Programme Preset" with Δ or ∇ and press OK. The MANUAL PROGRAMME PRESET menu appears. (See Fig. 21.)
- Using Δ or ∇ , select the programme position which you want to skip and press OK. The "SYS" position changes colour.
- Press Δ or ∇ until "----" appears in the SYSTEM position. (See Fig. 22.)
- Press OK. (See Fig. 23.) When you select programmes using the PROGR +/- buttons, the programme position will be skipped.
- Repeat steps 4 to 6 to skip other programme positions.
- Press MENU to return to TV picture.



PROG	SYS	CH	SEARCH	LABEL	AFT
13	B/G	C29	(off)	---	(on)
14	B/G	C31	(off)	---	(on)
15	B/G	C32	(off)	---	(on)
16	B/G	C33	(off)	---	(on)
17	B/G	C40	(off)	---	(on)
18	B/G	C35	(off)	---	(on)
19	B/G	C42	(off)	---	(on)
20	B/G	C48	(off)	---	(on)
21	B/G	C50	(off)	---	(on)
22	B/G	C54	(off)	---	(on)

Fig. 21

18	---
----	-----

Fig. 22

19	B/G
----	-----

Fig. 23

Captioning a Station Name

Programme names are usually automatically taken from Teletext if available. You can also "name" a channel or an input video source using up to five characters (letters or numbers) to be displayed on the TV screen (e.g. BBC1). Using this function, you can easily identify which channel or video source you are watching.

- Press MENU to display the main menu.
- Select "Preset" with Δ or ∇ and press OK. The PRESET menu appears.
- Select "Manual Programme Preset" with Δ or ∇ and press OK. The MANUAL PROGRAMME PRESET menu appears. (See Fig. 24.)
- Using Δ or ∇ , select the programme position you want to caption and press OK repeatedly until the first element of the LABEL position is highlighted.
- Select a letter or number with Δ or ∇ and press OK. The next element will be highlighted. Select other characters in the same way. If you want to leave an element blank, select - and press OK. (See Fig. 25.)
- After selecting all the characters, press OK repeatedly until the cursor appears by the next programme position (at the left margin). Now the caption you chose is stored. (See Fig. 26.)
- Repeat steps 5 and 6 to caption names for other channels.
- Press MENU to return to TV picture.

PROG	SYS	CH	SEARCH	LABEL	AFT
13	B/G	C29	(off)	---	(on)
14	B/G	C31	(off)	---	(on)
15	B/G	C32	(off)	---	(on)
16	B/G	C33	(off)	---	(on)
17	B/G	C40	(off)	---	(on)
18	B/G	C35	(off)	---	(on)
19	---	C42	(off)	---	(on)
20	B/G	C48	(off)	---	(on)
21	B/G	C50	(off)	---	(on)
22	B/G	C54	(off)	---	(on)

Fig. 24

20	B/G	C48	(off)	5	---	(on)
----	-----	-----	---------	---	-----	--------

Fig. 25

20	B/G	C48	(off)	SONY	(on)
----	-----	-----	---------	------	--------

Fig. 26

Operating Instructions

Watching the TV

MANUAL PROGRAMME PRESET

Manual Fine-Tuning

Normally, the AFT (automatic fine-tuning) is already operating. However, if the picture is distorted, you can use the manual fine tuning function to obtain better picture reception.

- 1 Press MENU to display the main menu.
- 2 Select "Preset" with Δ or ∇ and press OK.
The PRESET menu appears.
- 3 Select "Manual Program Preset" with Δ or ∇ and press OK.
The MANUAL PROGRAMME PRESET menu appears. (See Fig. 27.)
- 4 Using Δ or ∇ , select the programme position corresponding to the channel which you want to manually fine-tune, and press OK repeatedly until the AFT position changes colour.
- 5 Fine-tune the channel with Δ or ∇ so that you get the best TV reception. As you press the cursor buttons, the frequency changes from -15 to +15. (See Fig. 28.)
- 6 After fine tuning, press OK.
The cursor appears beside the next programme position (at the left margin). (See Fig. 29.) Now the fine-tuned level is stored.
- 7 Repeat steps 4 to 6 to fine-tune other channels.
- 8 Press MENU to return to TV picture.

To reactivate AFT (automatic fine tuning)
Repeat from the beginning and select "ON" in step 5.

MANUAL PROGRAMME PRESET					
PROG	SYS	CH	SEARCH	LABEL	AFT
13	B/G	C28	(off)	-----	(on)
14	B/G	C31	(off)	-----	(on)
15	B/G	C32	(off)	-----	(on)
16	B/G	C33	(off)	-----	(on)
17	B/G	C40	(off)	-----	(on)
18	B/G	C35	(off)	-----	(on)
19	---	C42	(off)	-----	(on)
20	B/G	C48	(off)	SONY	(on)
21	B/G	C50	(off)	-----	(on)
22	B/G	C34	(off)	-----	(on)

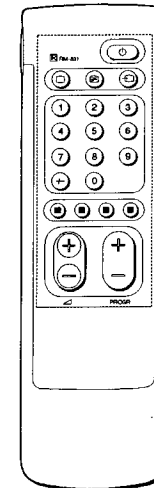
Fig. 27

20	B/G	C48	(all)	SONY	(3)
----	-----	-----	-------	------	-----

Fig. 28

20	B/G	C48	(off)	SONY	(3)
21	B/G	C49	(off)	---	(on)

Fig. 29



If no picture appears when you depress \odot on the TV and if the standby indicator on the TV is lit, the TV is in standby mode.
Press \square or one of the number buttons to switch it on.

PARENTAL LOCK					
PROG	CH	LABEL	PROG	CH	LABEL
0	AV1	VHS	8	C38	---
1	C25	ARD	9	C39	---
2	C42	ZDF	10	C40	---
3	C28	RTL	11	S41	---
4	C34	SAT	12	S42	---
5	C35	---	13	S43	---
6	C36	---	14	S44	---
7	C37	---	15	S45	---

Fig. 30

PROG	CH	LABEL	PROG	CH	LABEL
0	AV1	VHS	---	---	---
1	C25	ARD	---	---	---
2	C42	ZDF	---	---	---
3	C28	RTL	---	---	---

Fig. 31

PARENTAL LOCK

Parental Lock

You can prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

- 1 Press MENU to display the main menu.
- 2 Select "Preset" with Δ or ∇ and Press OK.
The PRESET menu appears.
- 3 Select "Parental Lock" with Δ or ∇ and press OK.
The PARENTAL LOCK menu appears. (See Fig. 30.)
- 4 Using Δ or ∇ , select the programme position you want to block and press OK.
The CH and LABEL change colour and the TV picture disappears indicating that this programme is now blocked. (See Fig. 31.)
- 5 Repeat step 4 to block other programme positions.
- 6 Press MENU to return to TV picture.

If you try to select a programme that has been blocked
The message "LOCKED" appears on the blank TV screen.

Cancelling blocking

- 1 On the PARENTAL LOCK menu, select the programme position you want to unblock with Δ or ∇ .
- 2 Press OK.
The CH and LABEL change colour to normal colour and the TV picture appears indicating that the blocking has been cancelled.

This section explains the basic functions you use while watching TV. Most of the operations can be done using the simple side of the Remote Commander.

Switching the TV on and off

Switching on

Depress \odot on the TV.

Switching off temporarily

Press \odot on the Remote Commander.

The TV enters standby mode and the standby indicator on the front of the TV lights up.

To switch on again

Press \square , PROG Δ or ∇ , or one of the number buttons on the Remote Commander.

Switching off completely

Depress \odot on the TV.

Selecting TV Programmes

Press PROG Δ or ∇ or press the number buttons.

To select a double-digit number

Press Δ or ∇ , then the numbers.

For example, If you want to choose 23, press Δ , 2, and 3

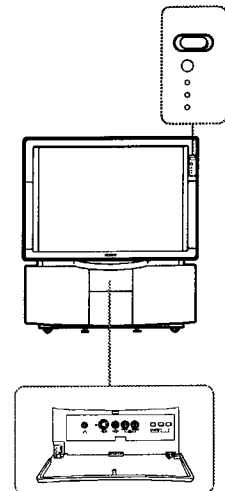
Adjusting the Volume

Press Δ or ∇ .

Operating the TV Using the Buttons on the TV

With the Δ or ∇ buttons on the TV, you can select programmes, adjust the volume, and select video input sources.

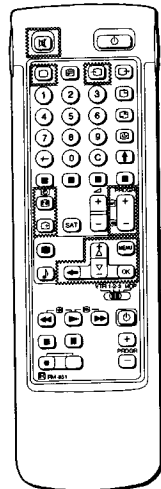
- 1 Press the Δ or ∇ button repeatedly until the programme number, Δ (for volume), or ∇ (for video input picture) appears. Then adjust with the Δ or ∇ buttons.
- 2 Press the Δ or ∇ buttons to switch on the TV from the standby mode.
- 3 Press Δ or ∇ simultaneously to reset picture and sound controls to the factory preset level (RESET function).



Adjusting and Setting the TV Using the Menu

For details of the teletext operation, refer to page 19.

For details of the video input picture, refer to page 24.



To make the Programme Table
Press MENU.

Watching Teletext or Video Input

Watching teletext

- 1 Press **TEXT** to view the teletext.
- 2 For teletext operation, enter a 3-digit page number with the number buttons to select a page.
For fasttext operation, press one of the coloured buttons.
For both operations, press **TEXT** (PAGE+) for the next page or **TEXT** (PAGE-) for the preceding page.
- 3 To go back to the normal TV picture, press **TV**.

Watching a video input picture

- 1 Press **VIDEO** repeatedly until the desired video input appears.
- 2 To go back to the normal TV picture, press **TV**.

More Convenient Functions

Use the Full-Function side of the Remote Commander.

Displaying the on screen indications

- Press **ON** once to display all the indications. They will disappear after a few seconds.
- Press **ON** twice to have the programme number and label stay on screen. Press twice again to make the indications disappear.

Muting the sound

Press **MUTE**.
To resume normal sound, press **MUTE** again.

Displaying the time

Press **TIME**. This function is available only when teletext is broadcast.
To make the time display disappear, press **TIME** again.

Displaying of the Programme Table

Press **OK**. A Programme Table will be displayed on the right side of the TV screen (See. Fig. 32.)

Selecting of TV programmes

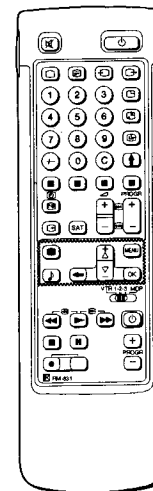
Press **PROGR +/-** or select the desired programme position using **Δ+** or **∇-**, and press **OK**.

1	ARD
2	SAT
3	TV5
4	C02
5	C15
6	RTL
7	SKY
8	S34
9	AV1
10	MTV

Fig. 32

PICTURE CONTROL

SOUND CONTROL



If you have made a mistake
Press **←** to go back to the previous position.

To go back to the main menu
Keep pressing **←**.

Note
HUE is only available for NTSC colour systems and RESOLUTION does not work for SECAM colour systems.

Note on LINE OUT
The audio level and the dual sound mode output from the G+ jack on the rear correspond to the Headphone VOLUME and DUAL SOUND settings.

When watching a video input picture
You can select DUAL SOUND to change the sound.

Adjusting the Picture and Sound

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste, in addition, you can set the resolution to obtain a higher quality picture. You can also select dual sound (bilingual) programmes when available or adjust the sound for listening with the headphones, or individually adjust and store the volume level of each channel (volume offset).

- 1 Press **PICT** (for picture) or **SND** (for sound) on the remote Commander.
or

Press **MENU** and select "Picture Control" or "Sound Control", then press **OK**.
The PICTURE CONTROL or SOUND CONTROL menu appears. (See Fig. 33 or Fig. 34.)

- 2 Using **Δ+** or **∇-**, select the item you want to adjust and press **OK**. The selected item changes colour. (See Fig. 35.)
- 3 Adjust the setting with **Δ+** or **∇-** and press **OK**. The cursor appears beside the next item (at the left margin). (See Fig. 36.)
For the effect of each control, see the table below.
- 4 Repeat steps 2 and 3 to adjust other items.
- 5 Press **MENU** to return to TV picture.

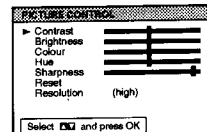


Fig. 33

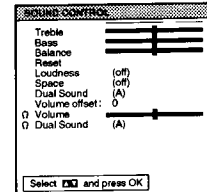


Fig. 34

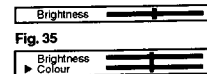


Fig. 35

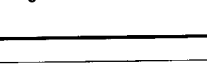


Fig. 36

Effect of each control

PICTURE CONTROL	Effect
Contrast	Less ——— More
Brightness	Darker ——— Brighter
Colour	Less ——— More
Hue	Greenish ——— Reddish
Sharpness	Softer ——— Sharper
Reset	Resets picture to the factory preset levels.
Resolution	(normal) (high) Obtain a higher picture quality

SOUND CONTROL	Effect
Treble	Less ——— More
Bass	Less ——— More
Balance	More left ——— More right
Reset	Resets sound to the factory preset levels.
Loudness	off: Normal on: When listening to low volume sound.
Space	off: Normal on: Obtain acoustic sound effect.
Dual Sound	A: left channel B: right channel Stereo mono The selected mode of the A-CD-B Indicator on the TV lights up (For NICAM broadcasts, see next page)
Volume offset	(-7) Less 0 (+7) More
Headphones:	Less ——— More
Volume	A: left channel B: right channel Stereo mono
Dual Sound	A: left channel B: right channel Stereo mono

Selecting Nicam Broadcasts*

This Sony TV has been designed to select stereo Nicam broadcasts when available. Whenever a Nicam broadcast is received, "NICAM" appears briefly on the screen. When the Nicam programme ends, or you switch channels to one without Nicam, the A-CD-B indicators, on the TV will switch off.

Nicam programmes can be broadcast in two ways. You may select the sound you want to hear in either of these by first following the instructions explained on page 16.

Service Being Broadcast	Action	Indication of the TV		
Stereo	Press Δ+ or ∇-	Stereo Nicam	Mono	
		A B	A B	

Press Δ+ or ∇- again to return to stereo Nicam (Mono 2-Channel)

		Channel A Nicam	Channel B Nicam	Mono
Bilingue	Press Δ+ or ∇-	A B	A B	A B

Press Δ+ or ∇- again to return to channel A Nicam

*Depending on availability of service.

PROGRAMME TABLE

Using the Programme Table

On this table, you can see which channel is preset to which programme position. You can also select programmes using this table.

- Press MENU to display the main menu.
- Select "Programme Table" with Δ+ or ∇- and press OK. The PROGRAMME TABLE menu appears. (See Fig. 37.)
- Select the programme number with Δ+ or ∇- and press OK. The selected programme appears.
- To scroll to higher programme numbers, press ∇-.
- Press MENU to return to TV picture.

PROGRAMME TABLE			
PROG	CH	LABEL	PROG CH LABEL
13	C29	21	C50
14	C31	22	C54
15	C32	23	C57
16	C33	24	S03
17	C35	25	S05
18	C40	26	S06
19	C42	27	S10
20	C46	28	S15

Fig. 37

TIMER	
▶ Sleep Timer (off)	
Select FNU and press OK	

Fig. 38

Using the Sleep Timer

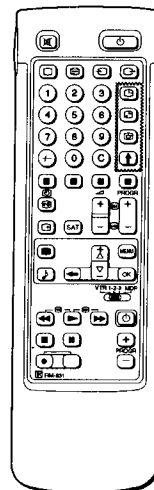
You can select a time period after which the TV automatically switches into standby mode.

- Press MENU to display the main menu.
- Select "Timer" with Δ+ or ∇- and press OK. The TIMER menu appears. (See Fig. 38.)
- Press OK. The time period option changes colour.
- Select the time period with Δ+ or ∇-. The time period (in minutes) changes as follows:
10 → 20 → 30 → 40 → 50 → 60 → 70 → 80 → 90
↑ OFF
- After selecting the time period, press OK. The cursor moves back to the left margin and the timer starts counting. One minute before the TV switches into standby mode, a message is displayed on the screen.
- Press MENU to return to TV picture.

To switch off the timer
Select "OFF" in step 3.

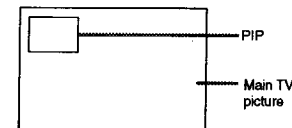
To check the
remaining time
Press ⏻.

PIP (Picture In Picture)



Note
RGB input source
cannot be displayed in
PIP.

With this function you can display a "PIP screen" (small picture) within the main TV picture. In this way you can watch or monitor the video output from any connected equipment (for example from a VTR) while watching TV or vice versa. For information about connection of other equipment, refer to page 23.



Switching PIP on and off

Press ⏻.

The PIP screen will be displayed. The PIP picture will come from the source chosen when the TV was last used.

To Switch PIP off

Press ⏻ again.

Selecting a PIP source

- Press t. The symbol t will be displayed at the bottom, left-hand corner of the screen.
- Press ⏻ repeatedly until the desired PIP source is indicated (e.g. TV, AV1, AV2, YC2, AV3, YC3, AV4, YC4).

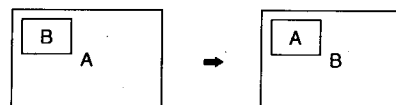
Note

If no video source has been connected, the PIP picture will be noisy.

Swapping screens

Press ⏻.

The main screen will switch the picture with the PIP screen.



Notes

- If a TV programme is on the PIP screen and a video source on the main picture, and you want to change channels, first press t and then the programme number buttons or PROGR +/-.
- Swapping screens takes about 2 seconds after pressing ⏻.
- After swapping screens if the colour systems of the main and PIP pictures are different, the PIP picture first appears in black and white and then in colour.

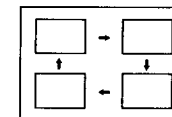
Changing the position of the PIP

Press ⏻ repeatedly to change the position of the PIP screen within the main screen. There are four different positions available.

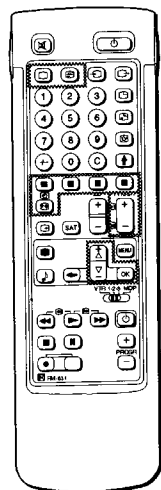
Displaying of PIP within Teletext

Press ⏻ while teletext is switched on.

The PIP screen will be displayed on the right side of the TV screen, the reduced teletext page will be displayed on the left side. Press ⏻ again to make the PIP screen disappear.



Teletext



Note
Teletext errors may occur if the broadcasting signals are weak.

With the simple side of the Remote Commander

You can switch teletext on and off, operate Fastext, and directly select page numbers.

Note
Fastext operation is only possible, if the TV station broadcasts Fastext signals.

TV stations broadcast an information service called Teletext via the TV channels. Teletext service allows you to receive various information pages such as weather reports or news at any time you want. For advanced teletext operation, use the buttons on the Full-Function side of the Remote Commander.

Direct Access Functions

Switching Teletext on and off

- 1 Select the TV channel which carries the teletext broadcast you want to watch.
- 2 Press **⏻** to switch on teletext.
A teletext page will be displayed (usually the index page). If there is no teletext broadcast, "No text available" is displayed on the information line at the top of the screen.

To switch teletext off

Press **⏻**.

Selecting a teletext page

With direct page selection

Use the number buttons to input the three digits of the chosen page number.
If you have made a mistake, type in any three digits. Then re-enter the correct page number.

With page-catching

- 1 Select a teletext page with a page overview (e.g. index page).
- 2 Press **OK**. "Page catching" will be displayed on the information line. Using **Δ+** or **∇-**, select the desired page and press **OK**. The required page number flashes. The requested page will appear in a few seconds.
Press **⏻** to resume normal teletext operation.

Accessing next or preceding page

Press **⏻** (PAGE+) or **⏻** (PAGE-).
The next or preceding page appears.

Superimposing the teletext display on the TV programme

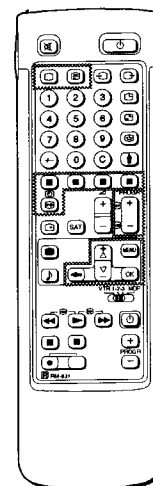
- Press **⏻** once in teletext mode or twice in TV mode.
- Press **⏻** again to resume normal teletext reception.

Preventing a teletext page from being updated

- Press **⏻** (HOLD). The HOLD symbol "⏻" is displayed on the information line.
- Press **⏻** to resume normal teletext reception.

Using Fastext

With Fastext you can access pages with one key stroke.
When a Fastext page is broadcast, a colour-coded menu will appear at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue buttons on the Remote Commander.
Press the corresponding coloured button on the Remote Commander which corresponds to the colour-coded menu. The page will be displayed after a few seconds.



Note
Some of the features may not be available depending on the Teletext service.

Using the Teletext Menu

This TV is provided with a menu-guided teletext system. When teletext is switched on, you can use the menu buttons to operate the teletext menu. Select the teletext menu functions in the following way:

- 1 Press **MENU**. The menu will be superimposed on the teletext display. (See Fig. 39.)
- 2 Using **Δ+** or **∇-**, select the teletext function you want and press **OK**. (See Fig. 40.)

USER PAGES/PRESET USER PAGES

See page 22 for information about presetting and operating the user pages.

INDEX

The index will give you an overview of the contents of the teletext and the page numbers.

DUAL PAGE MODE

After having selected the function two succeeding teletext pages will be displayed next to each other on the TV screen.

Accessing next or preceding page

Press **PROGR +/-**.

Page Catching

Press **OK**. Page Catching is now active on the left teletext page (See also page 19).

While you select a page number or the left page using **Δ+** or **∇-**, the corresponding teletext page will be displayed on the right side of the TV screen.

If you press **OK** again the right teletext page will appear on the left.

To cancel the function:

Press **⏻**.

TOP/BOTTOM/FULL

For convenient reading of a teletext page, you can enlarge the teletext display with the ability to scroll up and down the screen. After having selected the function, an information line Top/Bottom/Full will be displayed. (See Fig. 41.)

Press **Δ+** for Top to enlarge the upper half. For Bottom keep pressing **∇-**, to enlarge the lower half. Press **OK** for Full to resume the normal size.

Press **⏻** to resume normal teletext reception.

TEXT CLEAR

After selecting the function, you can watch a TV programme while waiting for a teletext page to be captured (the symbol changes colour). (See Fig. 42.)

Press **⏻** to view the requested page.

SUBTITLES

Your teletext service will inform you if a TV programme is subtitled. After having selected the function the subtitles will be displayed.



Fig. 39

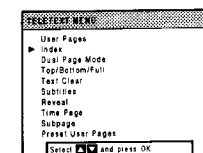


Fig. 40



Fig. 41

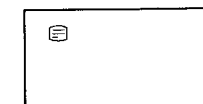


Fig. 42

Press OK to select "OFF" for the TIME PAGE setting to cancel the request.

REVEAL

Sometimes Pages contain concealed information, such as answers to a quiz. The reveal option lets you disclose the information. After selecting the function, an information line Reveal on/off will be displayed. (See Fig. 43.)

Using Δ+ or ∇-, select ON to reveal the information or OFF to conceal it again.

Press ⏻ to resume normal teletext reception.

TIME PAGE

Your teletext service will inform you, if a time coded page is available. You may have a page (e.g. an alarm page) displayed at a certain time.

- 1 Press OK. An information window will be displayed at the bottom of the page. Using Δ+ or ∇-, select "ON" and press OK.
- 2 To select the desired page, enter three digits for the page number (e.g. 452) using the number buttons.
- 3 To select the desired time, enter four digits for the desired time (e.g. 1800) using the number buttons and press MENU. The selected time is displayed at the top in the left-hand corner. At the requested time, the page will be displayed. Use the number buttons to select a new page.

SUBPAGE

To cancel the request Select SUBPAGE and press OK.

You may want to select a particular teletext page from several subpages which are rotated automatically. After having selected the function, an information line will be displayed.

To select the desired subpage, enter four digits using PROGR +/- or the number buttons (e.g. enter 0002 for the second page of a sequence).

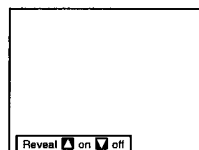


Fig. 43

If two broadcasting stations use the same Teletext
You can preset one bank to 2 different programme positions.

User Page Bank System

You can store up to 30 pages in the "teletext page bank system", in this way you have quick access to the pages you watch frequently.

Storing pages

There are 5 "banks" (A to E) for 5 teletext stations. In each bank you can store 6 preferred pages (P1 to P6).

- 1 Press ⏻ (if Teletext is not already on) and MENU to show the TELETEXT MENU display.
- 2 Select "Preset User Pages" with Δ+ or ∇- and press OK.
- 3 Select the desired bank with Δ+ or ∇- and press OK. The cursor will go to the first position (p1) of the preferred pages.
- 4 Input the three digits of your first preferred page with the number buttons. The cursor will go to the second position.
- 5 Repeat step 4 for the other 5 page numbers you want to preset. If you do not want to preset all 6 page numbers available, press OK without inserting any number.
- 6 Select "Allocate Bank" with Δ+ or ∇- and press OK.
- 7 Select the programme position on which you want to store the preset pages with Δ+ or ∇- and press OK. (See Fig. 44)
- 8 Select the desired bank with Δ+ or ∇- (Banks A to E are available) and press OK.
- 9 Repeat steps 3 to 8 for the other 4 banks available.


PRESET USER PAGES						
BANK	P1	P2	P3	P4	P5	P6
A	300	255	456	234	200	179
B	200	120	301	303	350	345
C	190	220	300	444		
D	128	331	255			
E	400	238	240	118	127	
Allocate BANK						
PROG	LABEL	BANK	PROG	LABEL	BANK	
00	VHS	..	04	MTV	D	
01	ZDF	A	05	SKY	B	
02	ARD	C	06	SAT	C	
Select  and press OK						

Fig. 44

Displaying User Pages.

- 1 Select MENU.
- 2 Select "User Pages" with Δ+ or ∇ and press OK. A table of the stored preferred pages will be displayed. (See Fig. 45.)
- 3 Select the desired page with Δ+ or ∇ and press OK. The page will be displayed after some seconds.

or

You can use the coloured buttons on the Remote Commander to have quick access to the first four User pages. Page 1 corresponds to the red button, P 2 to the green one, P 3 to the yellow one and P 4 to the blue button.

To select the desired page press the respective coloured button while you are in TV mode. Now the Page number of this teletext page will appear in white at the top in the left-handed corner of the TV screen. When the page number changes colour the page is available. Press the coloured button again to display the page.



USER PAGES		BANKS	
▶	PAGE 300		
	PAGE 200		
	PAGE 203		
	PAGE 500		
	PAGE 234		
	PAGE 159		
Select   and press OK			

Fig. 45

Connecting and Operating Optional Equipment

Connecting Optional Equipment

You can connect optional audio-video equipment to this TV such as a VTR, video disc player, and stereo system.

To connect a VTR using the T terminal
Connect the serial output of the VTR to the serial terminal "T" of the TV.

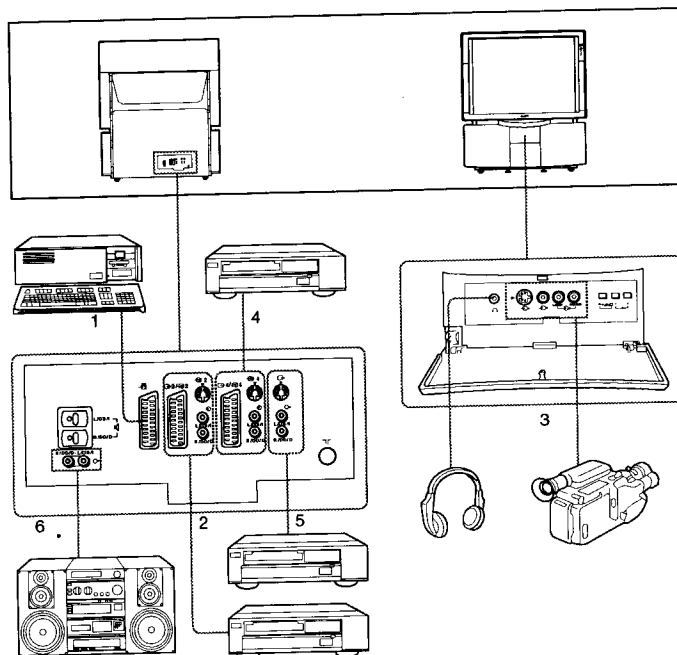
We recommend that you tune in the video signal to programme number "0". For details see "Preset channels manually" on page 10.

If the picture or the sound is distorted
Move the VTR away from the TV.

S/video Input(Y/C input)

Video signals may be separated into Y (luminance or brightness) and C (chrominance) signals. Separating the Y and C signals prevents them from interfering with one another, and therefore improves picture quality (especially luminance). This TV is equipped with 3 S Video input jacks through which these separated signals can be input directly.

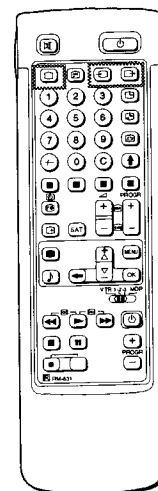
When connecting a monaural VTR
Connect only the white jack to both the TV and VTR.



Acceptable input signal	Available output signal
1 Normal audio/video and RGB signal	Video/audio from TV tuner
2 Normal audio/video and S video signal	Video/audio from selected source
3 Normal audio/video and S video signal	No outputs
4 Normal audio/video and S video signal	Video/audio displayed on TV screen (monitor out)
5 No inputs	S/video/audio signal displayed on TV screen (monitor out)
6 No inputs	Audio signal (variable)

Selecting input with PROGR +/- or number buttons

You can preset video input sources to the programme positions so that you can select them with PROGR +/- or number buttons. For details, see "Preset channels manually" on page 10.



Selecting input and output

This section explains how to view the video input picture (of the video source connected to your TV), and how to select the output signal using direct access buttons or the menu system.

Selecting input

Press repeatedly to select the input source.

The symbol of the selected input source will appear. (See Fig. 46.)

To go back to the normal TV picture

Press .

Input modes

Symbol	Input signal
	Audio/video input through the 1 connector
	Audio/RGB input through the 1 connector
	Audio/video input through the 2/- 2 connector
	Audio/S video input through the 2/- 2 or 2 connector (4-pin connector)
	Audio/video input through 3 and 3 on the front
	Audio/S video input through the 3 (4-pin connector) and 3 connectors
	Audio/video input through the 4/- 4 connector
	Audio/S video input through the 4/- 4 or 4 connector (4-pin connector)

You can also select the input mode using the P and +/- buttons on the TV. In this case, first select , and then press +/- buttons to select the input.

Selecting the output

The 2/- 2 connector outputs the source input from the other connectors.

Press repeatedly to select the output.

The symbol of the selected output source appears. (See Fig. 47.)

Output modes

Symbol	2/- 2 connector outputs
1	Audio/video signal from the 1 connector
2	Audio/video signal from the 2/- 2 connector
2	Audio/S video signal from the 2/- 2 or 2 connector (4 pin)
3	Audio/video signal from the 3, 3 connectors
3	Audio/S video signal from the 3, 3 connectors
4	Audio/video signal from the 4/- 4 connector
4	Audio/S video signal from the 4/- 4 or 4 connector (4 pin)
TV	Audio/video signal from the T aerial terminal



Fig. 46

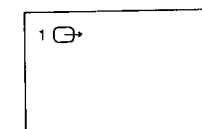
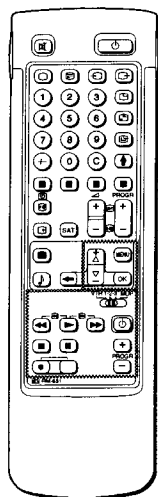


Fig. 47



When recording when you use the ● (record) button, make sure to press this button and the one to the right of it simultaneously.

Checking and selecting the input and output sources using the menu

You can display the menu to see which input sources are selected for the TV screen and PIP screen, and which output source is selected. You can also select them on the menu display.

- 1 Press MENU to display the main menu.
- 2 Select "Video Connection" with Δ or ∇ and press OK. The VIDEO CONNECTION menu appears. (See Fig. 48.)
You can see which source is selected for the TV and PIP input and for the output. If you want to select the input and output on this menu, go to the next step.
- 3 Select TV-screen (input source for the TV screen), PIP (input source for the PIP screen), or Output (output source) with Δ or ∇ and press OK.
One of the source items changes colour. (See Fig. 49.)
- 4 Select the desired source with Δ or ∇ . (See Fig. 50.)
For details about each source, see the table on page 24.
- 5 Press OK.
The selected source is confirmed, and the cursor appears. (See Fig. 51.)
- 6 Repeat steps 2 to 4 to select the source for other inputs or outputs.
- 7 Press MENU to return to TV picture.

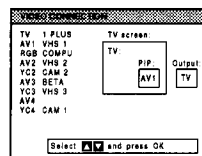


Fig. 48

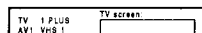


Fig. 49

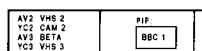


Fig. 50

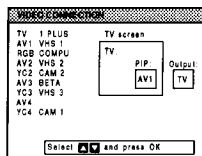


Fig. 51

Remote Control of Other Sony Equipment

You can use the TV Remote Commander to control most of Sony remote-controlled video equipment such as: Beta, 8 mm and VHS VTRs and video disc players.

Tuning the Remote Commander to the equipment

- 1 Set the VTR 1/2/3 MDP selector according to the equipment you want to control:
VTR1: Beta VTR
VTR2: 8 mm VTR
VTR3: VHS VTR
MDP: Video disc player
- 2 Use the buttons indicated in the illustration to operate the additional equipment.
If your video equipment is furnished with a COMMAND MODE selector, set this selector to the same position as the VTR 1/2/3 MDP selector on the TV Remote Commander.
If the equipment does not have a certain function, the corresponding button on the Remote Commander will not operate.

Troubleshooting

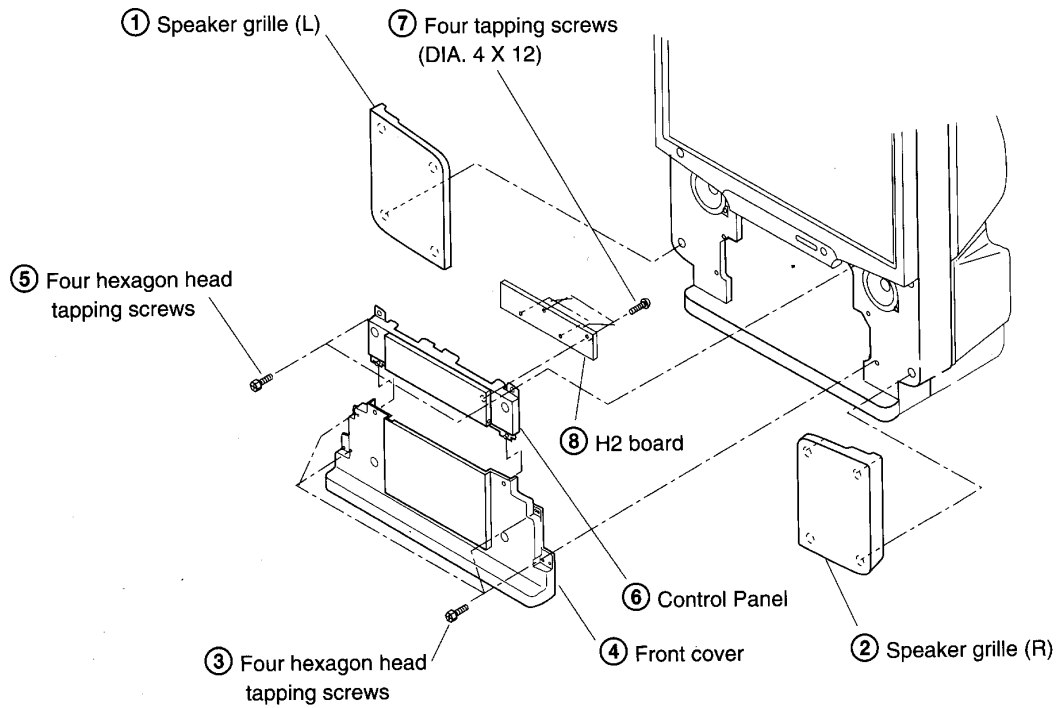
Here are some simple solutions to some problems which may affect the picture and sound.

Problem	Solution
No picture (screen is dark), no sound	<ul style="list-style-type: none"> • Plug in the TV in. • Press \odot on the TV (if \odot indicator is on, press \square or a programme number on the Remote Commander). • Check the aerial connection. • Check if the selected video source is on. • Turn the TV off for three or four seconds and then turn it on again using \odot.
Poor or no picture (screen is dark), but sound is OK	<ul style="list-style-type: none"> • Press \blacksquare to enter the PICTURE CONTROL menu and adjust the BRIGHTNESS, CONTRAST and COLOUR.
Poor picture quality when watching a RGB video source	<ul style="list-style-type: none"> • Press \ominus repeatedly to select \ominus.
Good picture but no sound	<ul style="list-style-type: none"> • Press Δ +. • If K is displayed on the screen, press K.
No colour for colour programmes	<ul style="list-style-type: none"> • Press \blacksquare to enter the PICTURE CONTROL menu, select RESET, then press OK.
Remote Commander does not function	<ul style="list-style-type: none"> • Replace the battery.

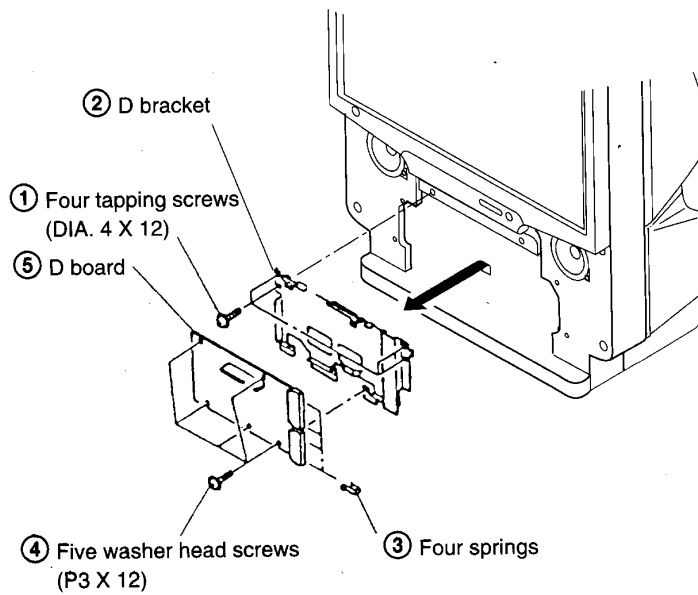
If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.

SECTION 2 DISASSEMBLY

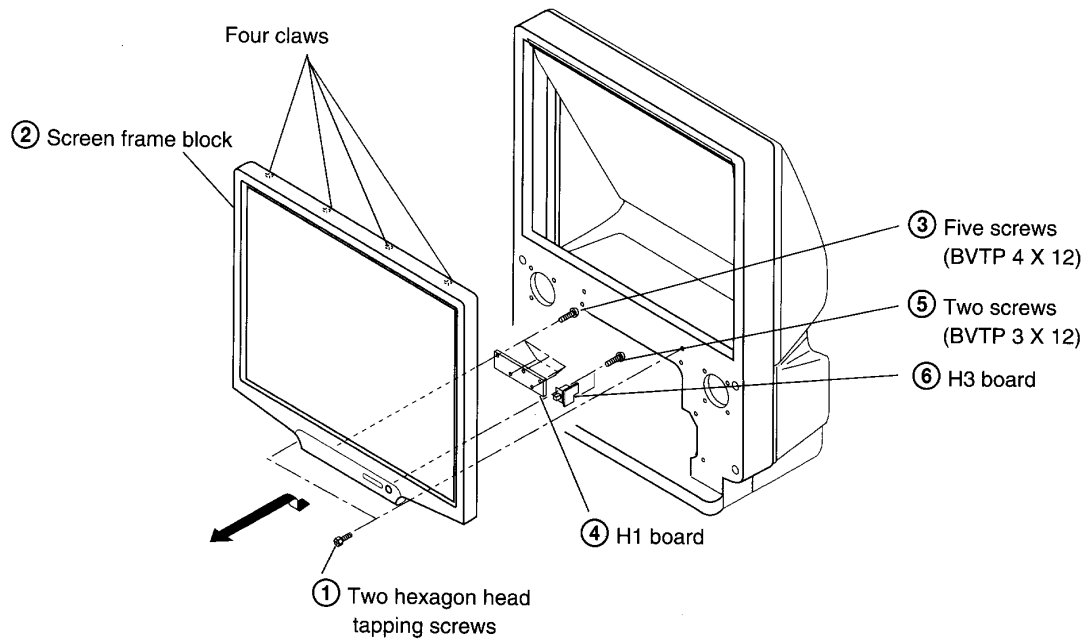
2-1. H2 BOARD REMOVAL



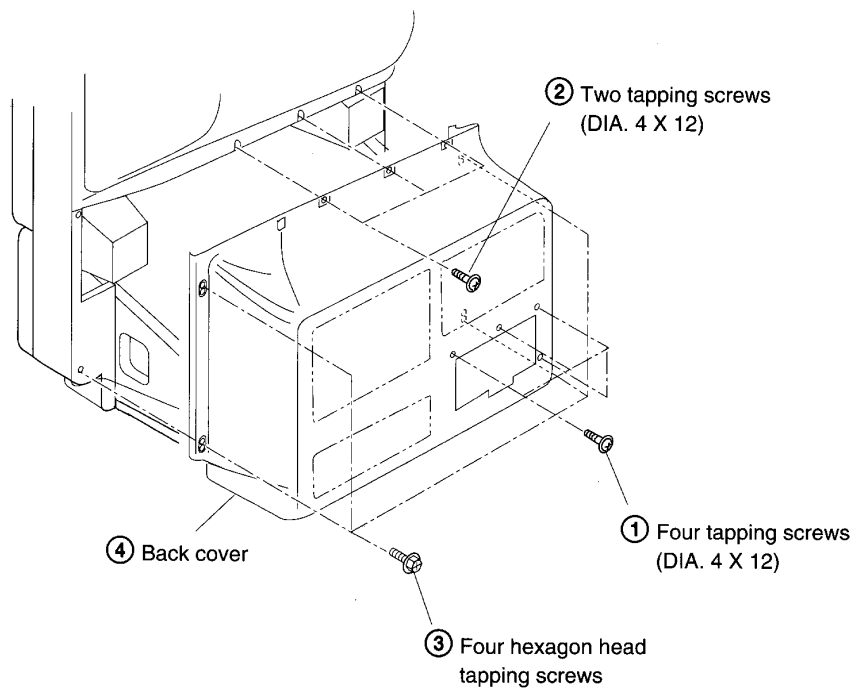
2-2. D BOARD REMOVAL



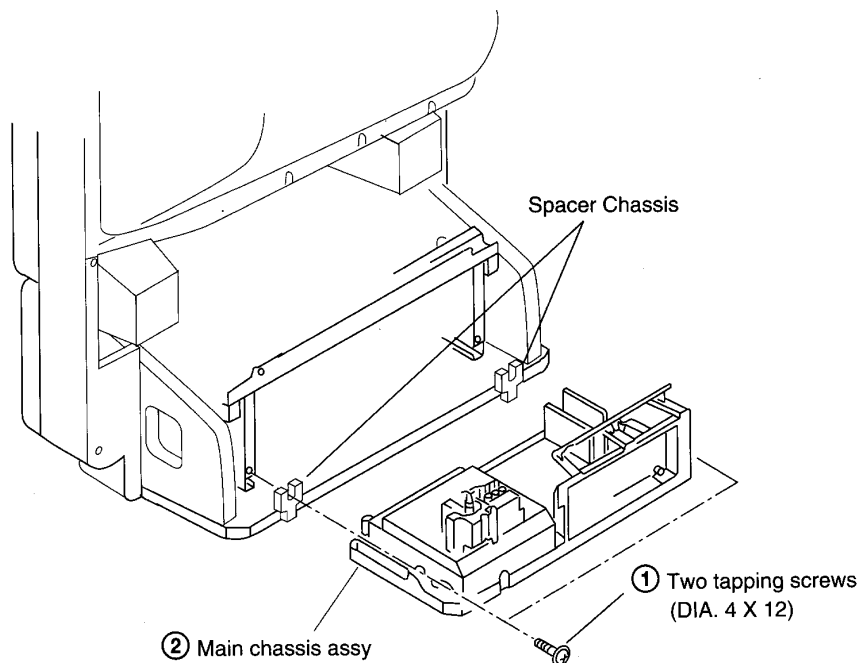
2-3. H1 AND H3 BOARD REMOVAL



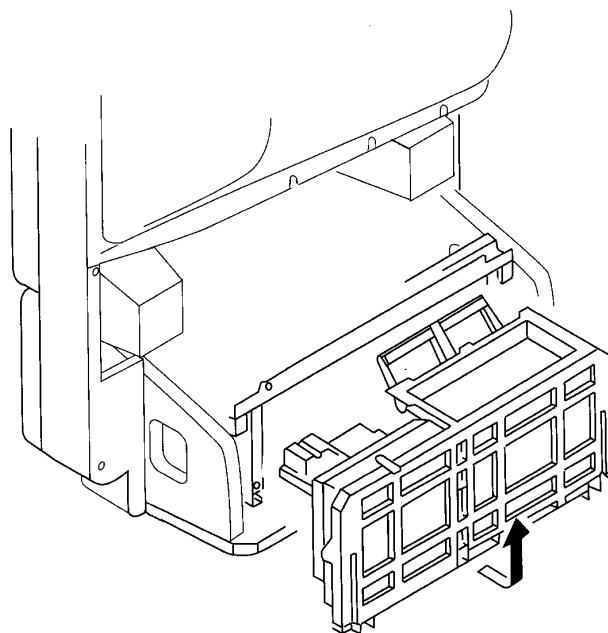
2-4. BACK COVER REMOVAL



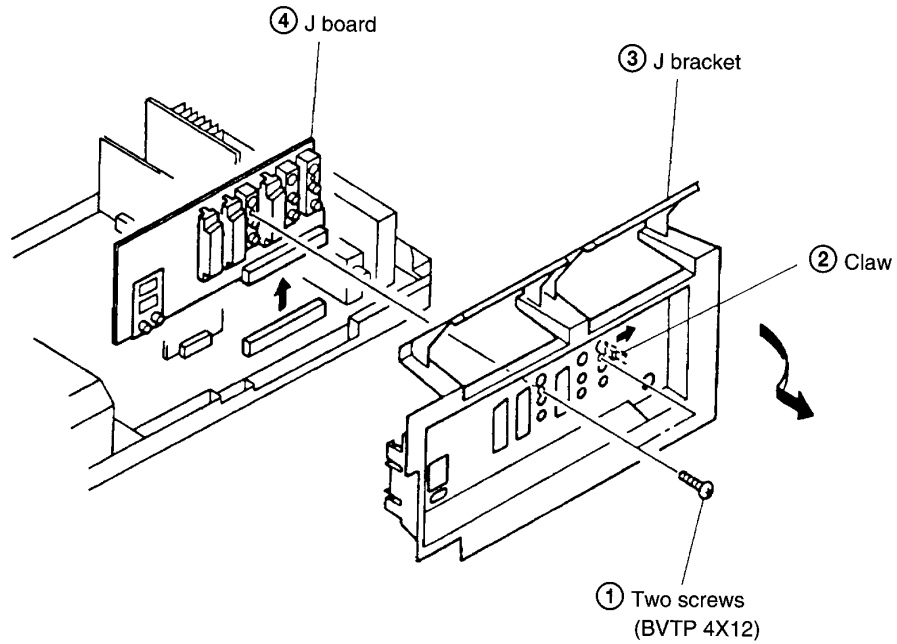
2-5. MAIN CHASSIS ASSY REMOVAL



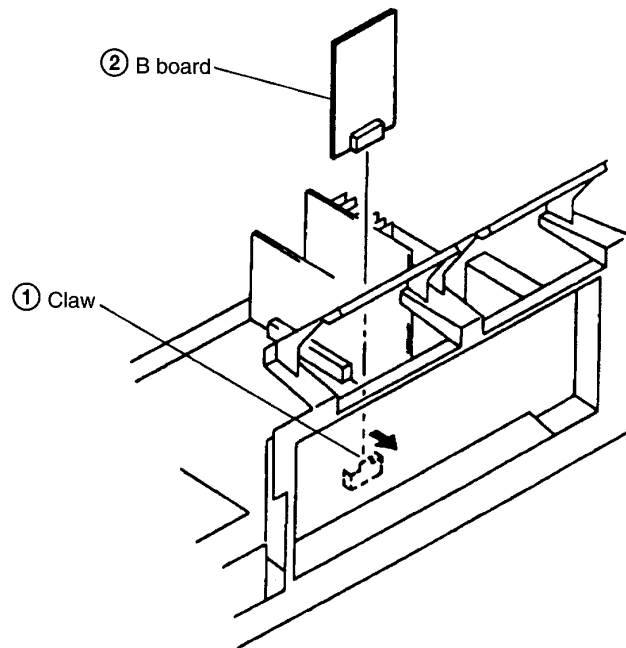
2-6. SERVICE POSITION



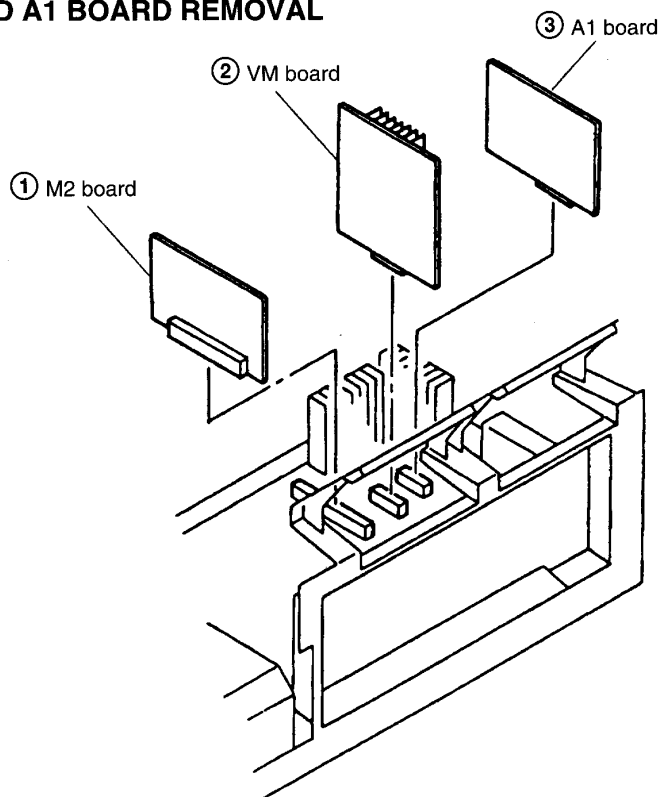
2-7. J BRACKET AND J BOARD REMOVAL



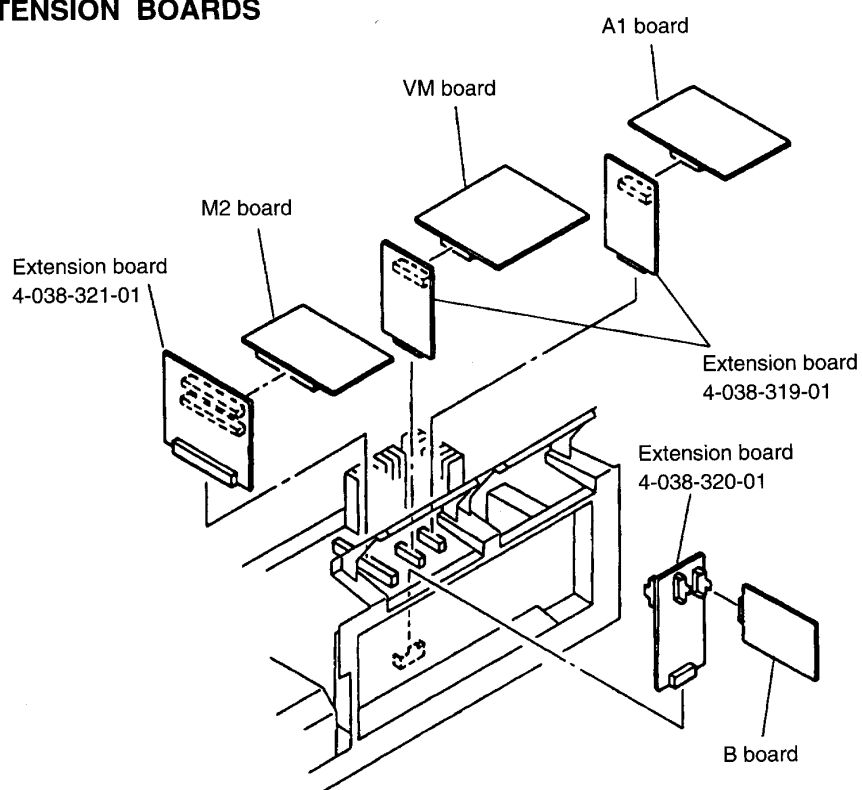
2-8. B BOARD REMOVAL



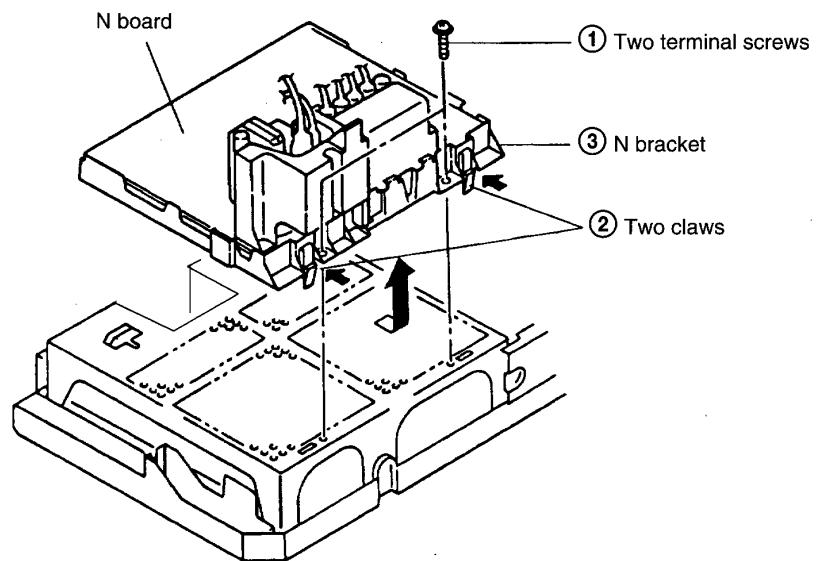
2-9. M2, VM AND A1 BOARD REMOVAL



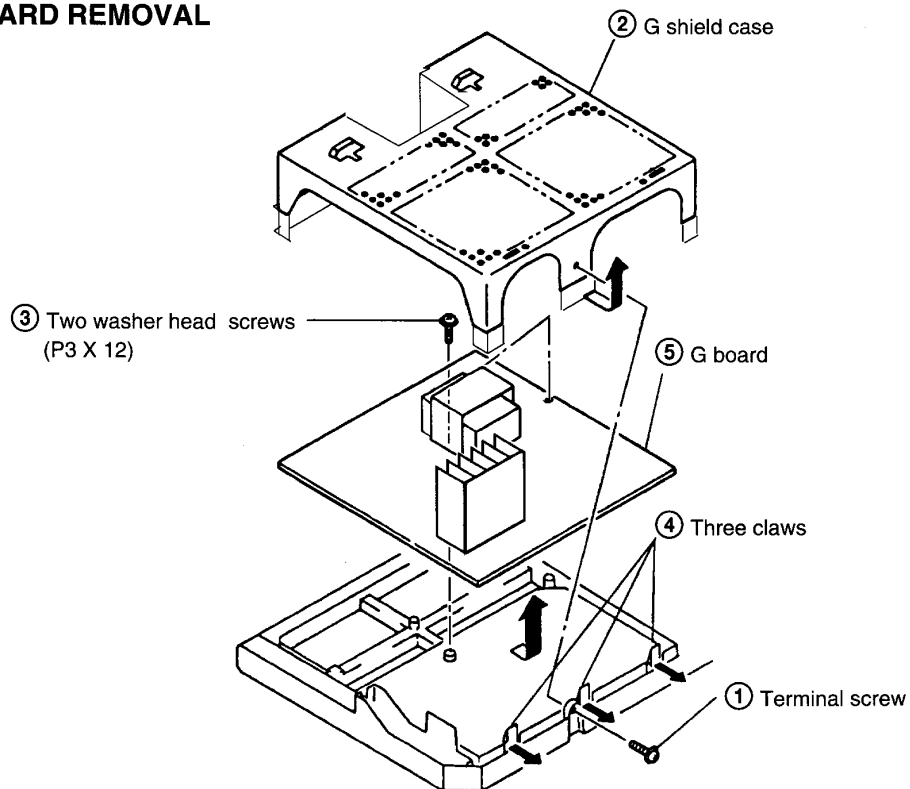
2-10. EXTENSION BOARDS



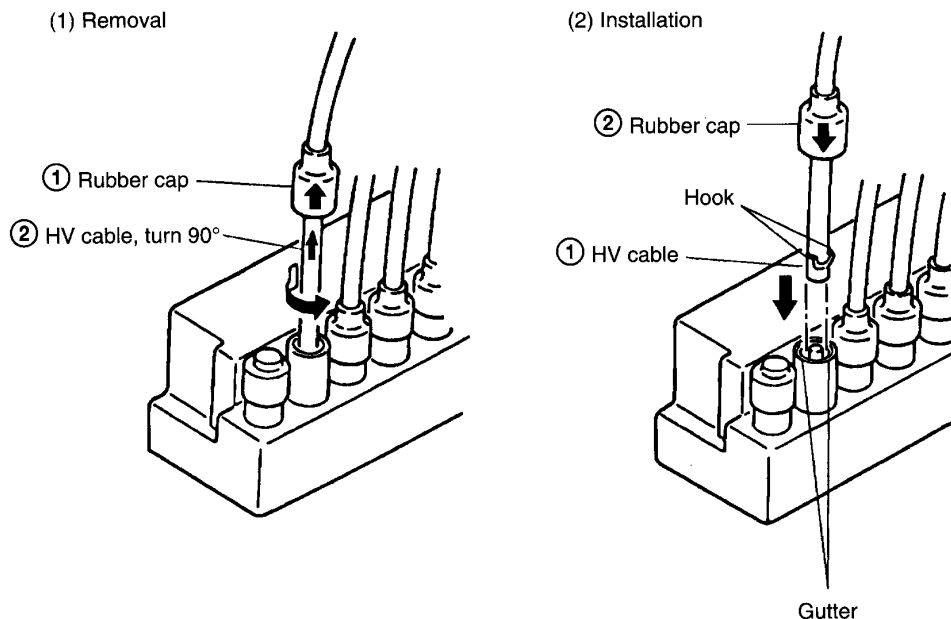
2-11. N BRACKET REMOVAL



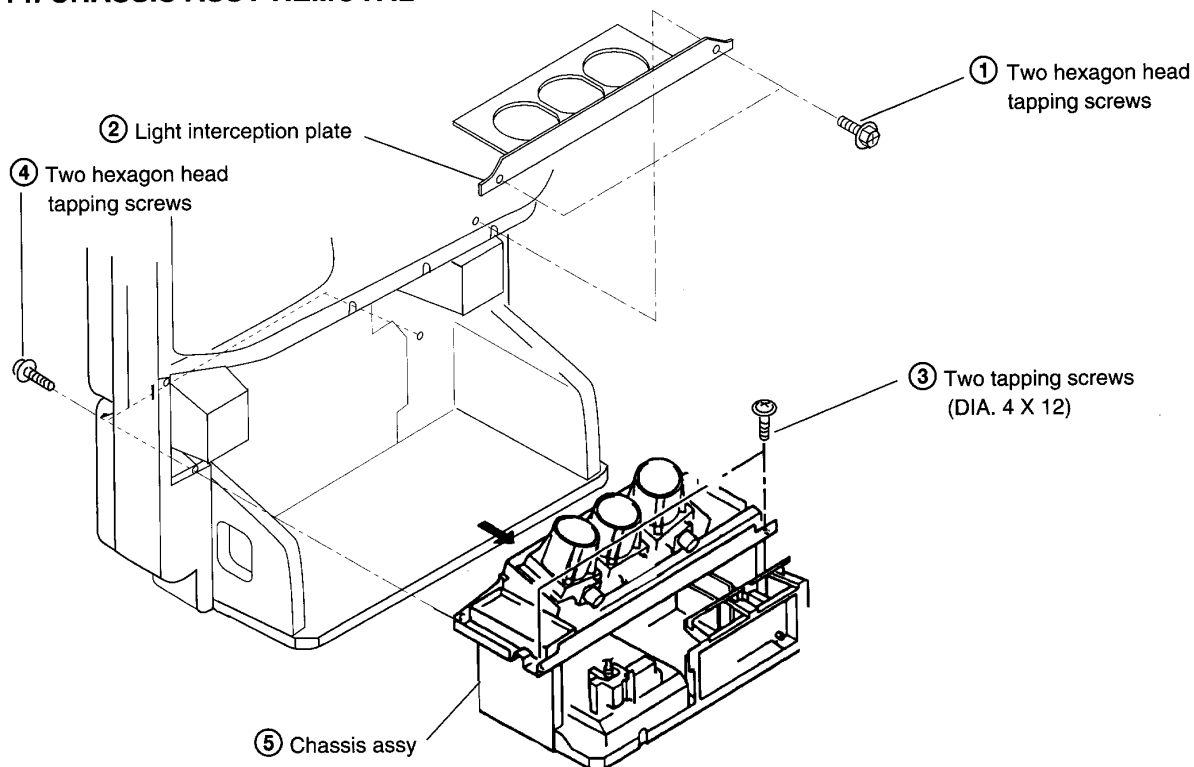
2-12. G BOARD REMOVAL



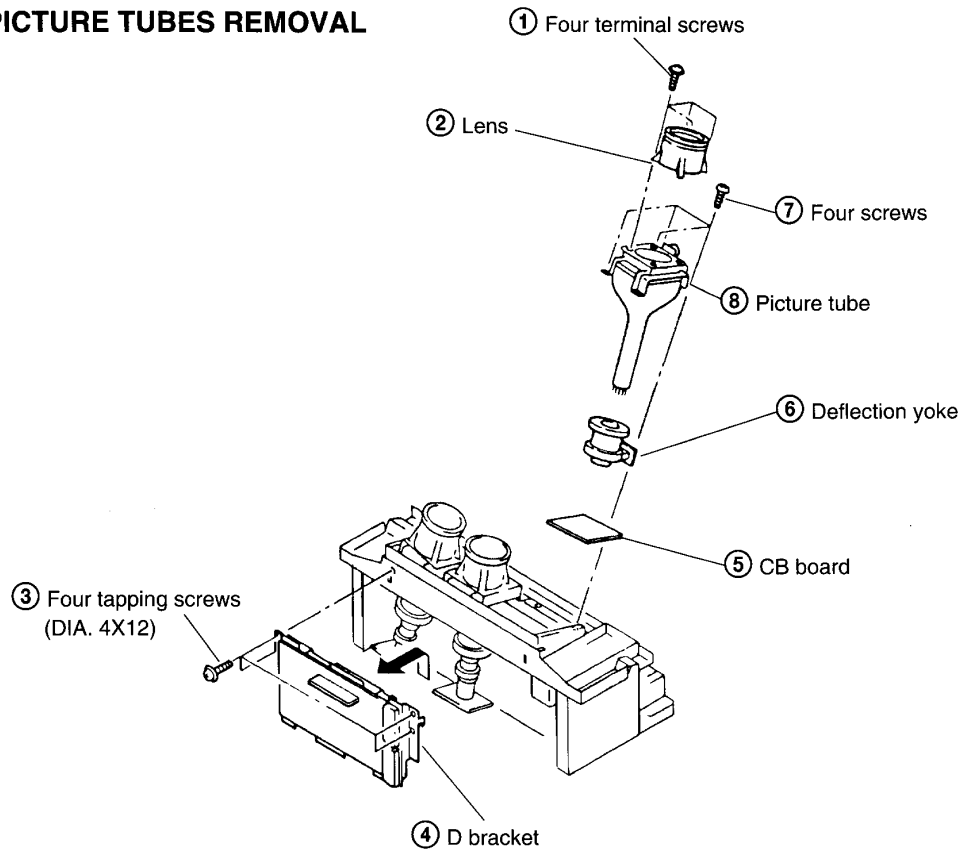
2-13. HIGH-VOLTAGE CABLE REMOVAL AND INSTALLATION



2-14. CHASSIS ASSY REMOVAL



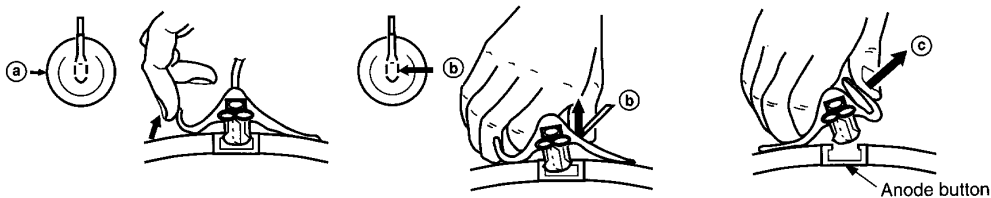
2-15. PICTURE TUBES REMOVAL



• REMOVAL OF ANODE-CAP

NOTE: Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

• REMOVING PROCEDURES



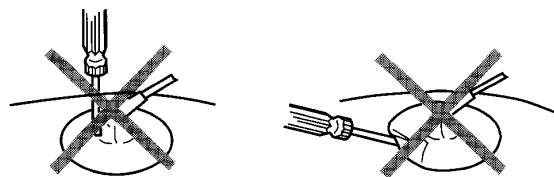
- ① Turn up one side of the rubber cap in the direction indicated by the arrow (a).

- ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b).

- ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow (c).

• HOW TO HANDLE AN ANODE-CAP

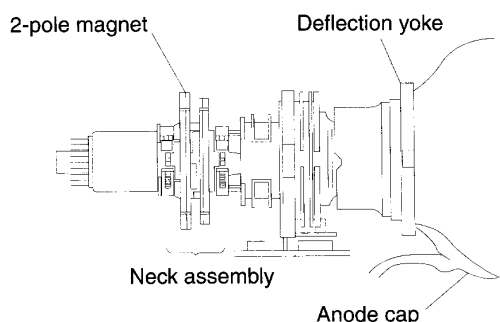
- ① Don't damage the surface of the anode-cap with sharp shaped material!
- ② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.
- ③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.



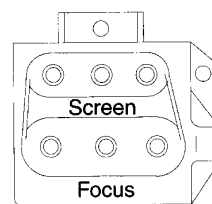
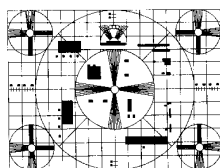
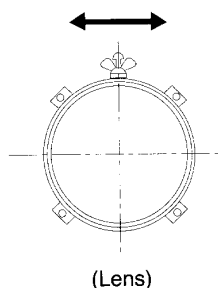
SECTION 3 SET - UP ADJUSTMENTS

3-1. FOCUS LENS ADJUSTMENTS

1. Set the D-board registration variable resistor (VR) and the position VR (CENTER VR) to mechanical center.
2. Set the centering magnets (for red, green, and blue) to 0 as shown in the figure.

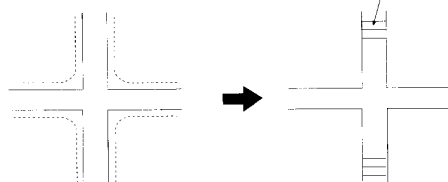


3. Input a monoscope signal. Set BRIGHTNESS to 50% and PICTURE to minimum. Make rough adjustments so that the 20IRE of the monoscope signal becomes faintly luminous.
4. Set the PICTURE and BRIGHTNESS to maximum. Press the commander menu button. Select CONVERGENCE to display the test signal.
5. Enter into the service mode. Select R MUTE (ITEM 35) of CXA1587S to cut off red output. Similarly, select B MUTE (ITEM 37) to cut off blue output.
6. Turn the green lens to eliminate flare of the test signal.

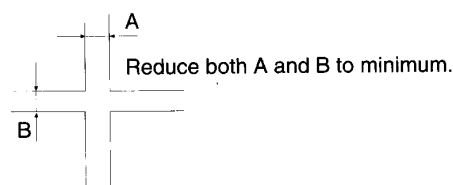


(Focus block)

Verify that scanning lines are visible.



7. Turn the green focus VR in the focus block to adjust green focus to reduce both A and B of the test signal to minimum.



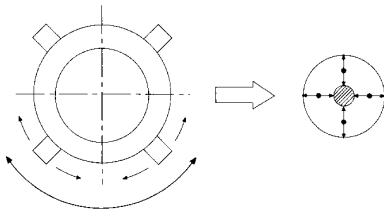
8. Repeat step 7 a number of times to improve tracking and obtain optimum lens focus. Then tighten the lens screws.

3-2. DEFLECTION YOKE POSITION ADJUSTMENTS

1. Input a monoscope signal.
2. Enter into the service mode. Select R MUTE (ITEM 35) of CXA1587S to cut off the red output. Similarly, select B MUTE (ITEM 37) of CXA1587S to cut off the blue output.
3. Loosen the deflection yoke (DY) fitting screws. Tilt the DY to obtain the best horizontal and vertical monoscope patterns.
4. After adjustment, press the DY onto the cathode ray tube (CRT) funnel and tighten the screws.
5. Also adjust the DY positions for red and blue outputs in the same way.

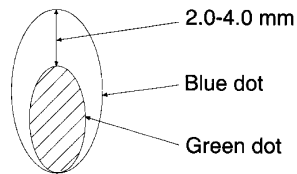
3-3. 2-POLE MAGNET ADJUSTMENT

1. Input a dot signal from the pattern generator.
2. Enter into service mode. Select R MUTE (ITEM 35) of CXA1587S to cut off red output.
Similarly, select B MUTE (ITEM 37) of CXA1587S to cut off blue output.
3. Set PICTURE to maximum. Turn the green focus variable resistor (VR) in the focus block counterclockwise to brighten the point in the dot.
4. Adjust the 2-pole magnet to position the bright point at the center of the dot.
5. Adjust the red and blue dots in the same way.



3-4. DE-FOCUS ADJUSTMENT (BLUE)

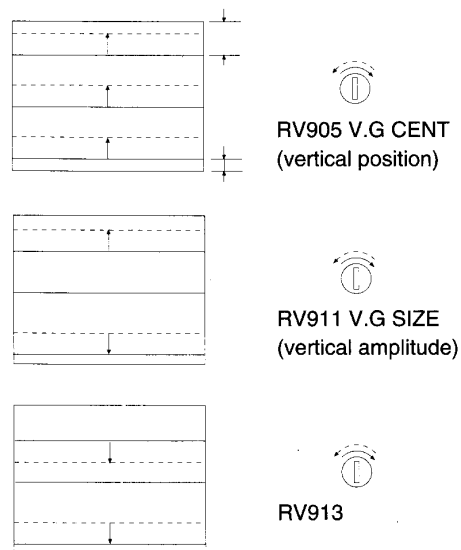
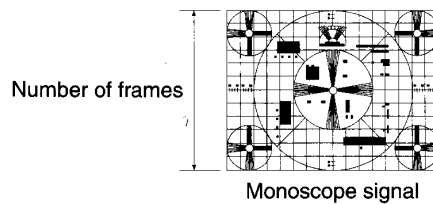
1. Input a dot signal from the pattern generator.
2. Turn the blue focus variable resistor (VR) in the focus block counter clock wise so that the diameter of the blue dot becomes between 2 and 4 mm bigger than the green dot.



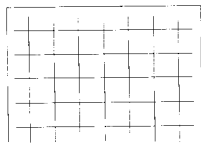
3-5. GREEN PICTURE ADJUSTMENTS

1. Input a monoscope signal.
2. Enter into service mode. Select R MUTE (ITEM 35) of CXA1587S to cut off the red output.
Similarly, select B MUTE (ITEM 37) of CXA1587S to cut off the blue output.
3. Turn RV913, the vertical green linearity variable resistors (V.G LIN VRs) on the D-board, to obtain optimum vertical linearity.
Then turn RV911, the vertical green amplitude variable resistor (V.G SIZE VR) to set vertical amplitude to 11.7 frames.

Note: The vertical position indicator of the monoscope signal must be positioned at the center by adjusting RV905, the vertical green center position variable resistor (V.G CENT VR) in advance.



4. Verify that the horizontal lines on the top and bottom of cross-hatched area of the monoscope signal are horizontal and linear.



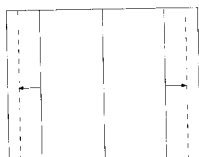
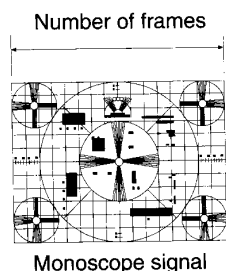
5. Turn RV916, RV964 and RV969, the horizontal green linearity variable resistors (H.G LIN VRs) on the D-board, to obtain an optimum horizontal linearity. Then turn RV908, the horizontal green amplitude to 15.6 frames.

Note: The horizontal position indicator of the monoscope signal must be positioned at the center by adjusting RV902, the horizontal green center position variable resistor (V.G CENT VR) in advance.

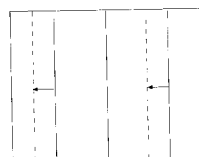
6. Input a cross hatch signal from the pattern generator. Turn the vertical green (V.G) and the horizontal green (H.G) variable resistors (VRs) and make adjustments according to the following steps:

(Adjustment procedure)

1. [BOW] → [SKEW] → [CENT (center position)]
2. [PIN (pin warp)] → [SUB BOW] → [BOW]
3. [KEYS (trapezoid)] → [SUB SKEW] → [SKEW]
4. [M.WAVE (middle sine wave warp)] → [WAVE-A (upper and lower sine wave warp)] → [WAVE-U (upper sine wave warp)]
* For vertical (V) only.
5. [V-M.PIN (vertical middle pin warp)] → [V/WING (vertical wing warp)]
* For vertical (V) only.
6. [H-M.PIN (horizontal middle pin warp)]
* For horizontal (H) only.

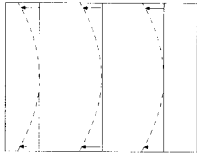



RV908 H.G SIZE
(horizontal position)

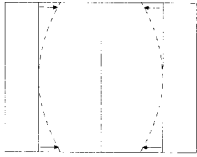


RV916 H.G LIN
(horizontal linearity)

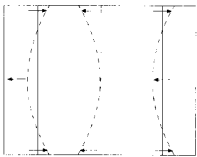
(Dot motion)




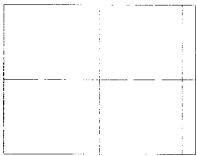
 RV932 H.G BOW
(horizontal green bow)



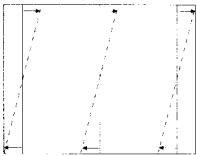
 RV941 H.G PIN
(horizontal green pin warp)




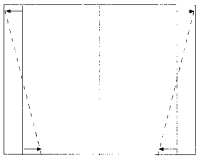
 RV950 H.G SUB BOW
(horizontal green sub bow)



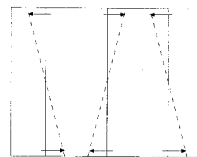
V.G BOW RV935
V.G PIN RV938
V.G SUB BOW RV953




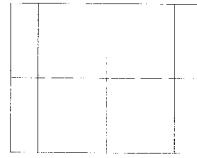
 RV920 H.G SKEW
(horizontal green skew)



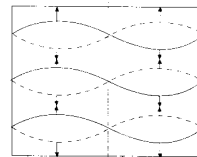
 RV925 H.G KEWS
(horizontal green trapezoid)




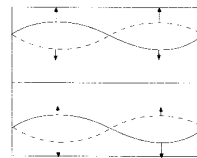
 RV944 H.G SUB SKEW
(horizontal green sub skew)




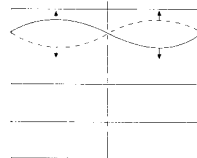
V.G SKEW RV923
V.G KEYS RV929
V.G SUB SKEW RV947




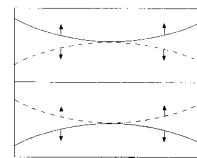
 RV962 V-M-WAVE
(vertical middle sine wave warp)




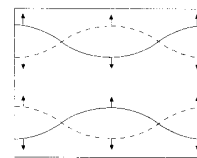
 RV975 V-WAVE-A
(vertical upper and lower
sine wave warp)




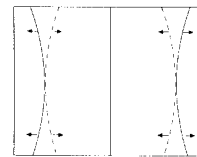
 RV978 V-WAVE-U
(vertical upper sine wave warp)



 RV980 V-M. PIN
(vertical middle pin warp)
* Common in red, green,
and blue



 RV957 V/WING
(wing warp)
* Common in red, green,
and blue



 RV956 H/M. PIN
(vertical middle pin warp)

3-6. GREEN AND RED REGISTRATION ADJUSTMENTS

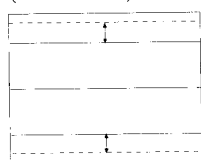
1. Input a cross hatch signal from the pattern generator.
2. Enter into service mode. Select B MUTE (ITEM 37) of CXA1587S to cut off the blue output.
3. Turn the vertical red (V. R) and horizontal red (H. R) variable resistors (VRs) to adjust red picture convergence in relation to the green picture according to the following steps:

(Adjustment procedure)

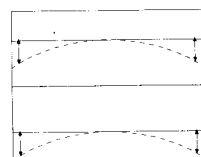
1. [LIN (linearity)] → [SIZE (amplitude)] → [CENT (center position)]
2. [BOW] → [SKEW] → [CENT (center position)]
3. [PIN (pin warp)] → [SUB BOW] → [BOW]
[H/M. PIN (horizontal middle pin warp)]
4. [KEYS (trapezoid)] → [SUB SKEW] → [SKEW]
5. [M. WAVE (middle sine wave warp)] → [WAVE-A (upper and lower sine wave warp)] → [WAVE-U (upper sine wave warp)]


* For vertical (V) only.

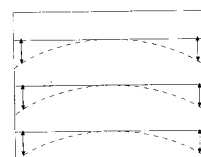
(Dot motion)




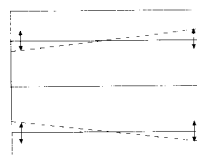

RV912 V.R SIZE
(vertical red amplitude)



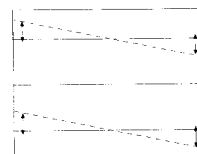

RV952 V.R SUB BOW
(vertical red sub bow)




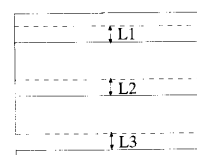

RV943 V.R BOW
(vertical red bow)



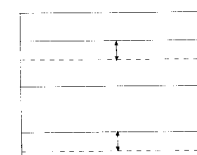

RV928 V.R KEYS
(vertical red trapezoid)



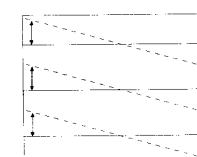

RV946 V.R SUB SKEW
(vertical red sub skew)





RV904 V.R CENT
(vertical red center position)




RV917 V.R LIN
(vertical red linearity)




RV922 V.R SKEW
(vertical red skew)

H.R LIN	RV915
H.R SIZE	RV907
H.R CENT	RV901
H.R BOW	RV931
H.R SKEW	RV919
H.R PIN	RV940
H.R KEYS	RV926
H.R SUB BOW	RV949
H.R SUB SKEW	RV943
V-M-WAVE	RV973
V-WAVE-A	RV976
V-WAVE-U	RV979
V-M. PIN	RV980
V/WING	RV957
H/M. PIN	RV956

3-7. GREEN AND BLUE REGISTRATION ADJUSTMENTS

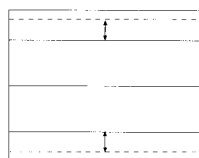
1. Input a cross hatch signal from the pattern generator.
2. Enter into service mode. Select R MUTE (ITEM 35) of CXA1587S to cut off the red output.
3. Turn the vertical blue (V. B) and horizontal blue (H. B) variable resistors (VRs) to adjust blue picture convergence in relation to the green picture according to the following steps:

(Adjustment procedure)

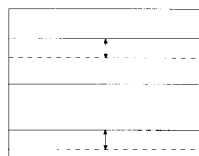
1. [LIN (linearity)] → [SIZE (amplitude)] → [CENT (center position)]
2. [BOW] → [SKEW] → [CENT (center position)]
3. [PIN (pin warp)] → [SUB BOW] → [BOW]
[H/M. PIN (horizontal middle pin warp)]
4. [KEYS (trapezoid)] → [SUB SKEW] → [SKEW]
5. [M. WAVE (middle sine wave warp)] → [WAVE-A (upper and lower sine wave warp)] → [WAVE-U (upper sine wave warp)]

* For vertical (V) only.

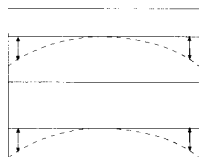
(Dot motion)




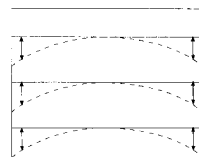

RV912 V.B SIZE
(vertical blue amplitude)




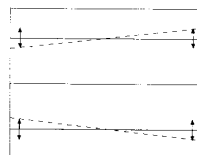

RV918 V.B LIN
(vertical blue linearity)



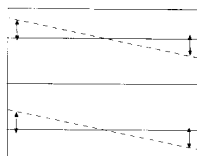

RV954 V.B SUB BOW
(vertical blue sub bow)




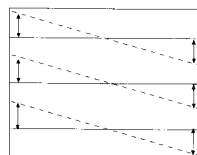

RV936 V.B BOW
(vertical blue bow)



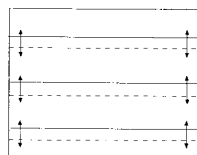

RV930 V.B KEYS
(vertical blue trapezoid)



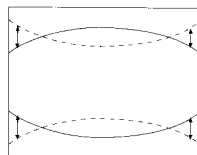

RV948 V.B SUB SKEW
(vertical blue sub skew)



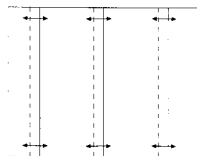

RV924 V.B SKEW
(vertical blue skew)



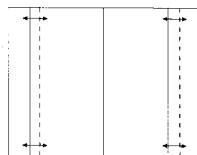

RV906 V.B CENT
(vertical blue center position)



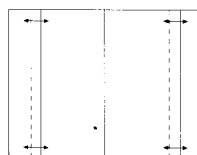

RV939 V.B PIN
(vertical blue pin warp)



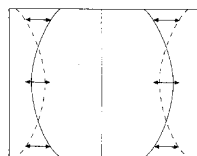

RV903 H.B CENT
(horizontal blue center position)



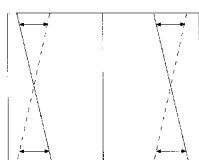

RV909 H.B SIZE
(horizontal blue amplitude)




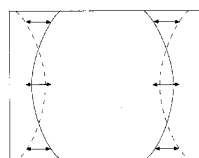

RV914 H.B LIN
(horizontal blue linearity)




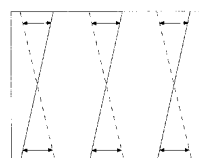

RV942 H.B PIN
(horizontal blue pin warp)



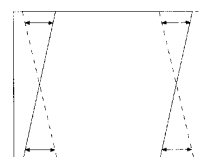
 **RV954 H.B SUB SKEW**
(horizontal blue sub skew)



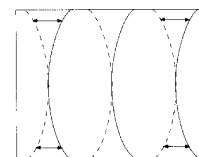
 **RV951 H.B SUB BOW**
(horizontal blue sub bow)




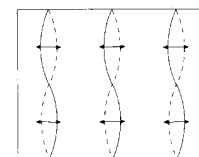
 **RV921 H.B SKEW**
(horizontal blue skew)




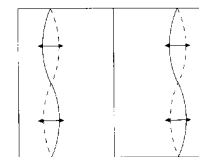
 **RV927 H.B KEYS**
(horizontal blue trapezoid)




 **RV933 H.B BOW**
(horizontal blue bow)



 **RV981**
* Common in red, green, and blue



 **RV982**
* Common in red, green, and blue

H/M PIN RV958
M. WAVE RV961
WAVE-A RV974
WAVE-U RV977

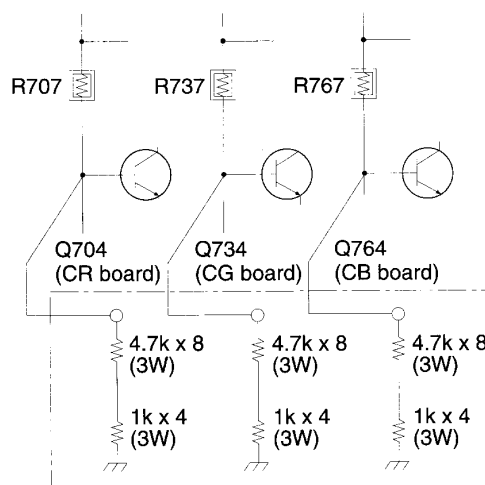
3-8. REGISTRATION ADJUSTMENTS

1. Output red, blue, and green.
2. Output cross hatch and monoscope signals to check registration. Also check focus.

3-9. WHITE BALANCE ADJUSTMENTS

1) Screen adjustment

1. Input an all white signal from the pattern generator.
2. Remove the connectors CR-15, CG-16, and CB-17.
3. Fit jigs between R707, R737 and R767 and ground.



* Resistors in each jig are connected in series.

4. Turn the RGB (red, green, and blue) screen variable resistors in the focus block to make the flyback line faint. Stop before the line completely disappears.
5. Insert connectors CR-15, CG-16, and CB-17.

2) White balance adjustments (09, 14, 15, 16, 17)

1. Input a monoscope signal and enter into service mode.
2. Select the picture quality adjustment from the menu and set PICTURE to minimum. Select the CXA1587S service item.
3. Use the commander to adjust 09 (SUB BRIGHT) so that 10IRE of the monoscope pattern becomes faintly luminous.
4. Input an all white signal.
5. Set PICTURE to minimum. Adjust item 16 (green cut off) and 15 (blue drive) to obtain an optimum white balance.
6. Set PICTURE to maximum. Adjust item 14 (green drive) and 15 (blue drive) to obtain an optimum white balance.
7. Repeat the white balance adjustment alternating PICTURE settings at the minimum and maximum.

SECTION 4

CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-831.

HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set while pressing any two buttons on the front panel.

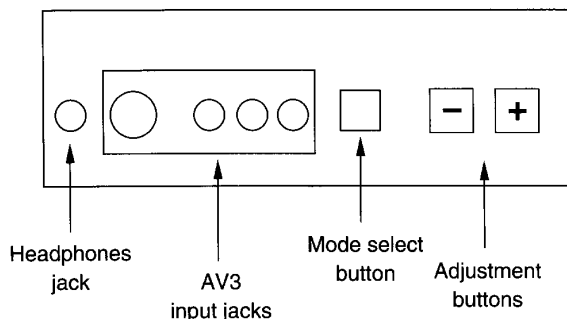


Fig.4-1

2. "TT" will appear at the upper right corner of the screen.

Command operation in service mode.

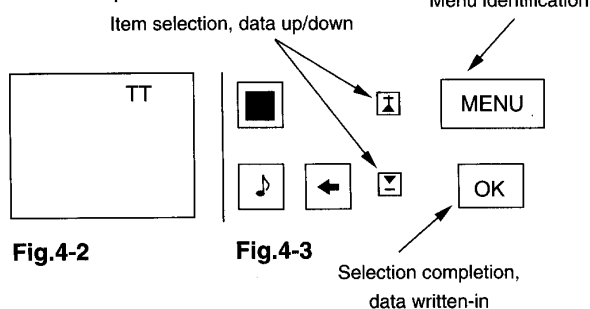


Fig.4-2

Fig.4-3

3. Press the **MENU** button on the remote commander to obtain the menu on the screen.

MAIN MENU	
	Programme Table
	Video Connection
	Picture Control
	Sound Control
	Timer
	Preset
	Language
>	DEMO
	Convergence
Select < > and press OK	

Fig.4-4

4. Press the **▲** and **▼** buttons on the remote commander and move > to DEMO.
5. Press **OK** button to proceed to the next menu.
6. The menu of Fig. 4-5 will appear on the screen. Select the DEVICE corresponding to the adjustment item from the table on the next page.

DEVICES	
	INIT
>	CXA1587S
	CXD2018Q
	TDA9145
	CXA1526
	TDA6612
	CX 7948A
	PIP
Select < > and press OK	

Fig 4-5

7. If adjustment item is CXA1587S, press the **▼** button and move > to CXA1587S.

CXA1587S

Item No.	Adjustment item	Data Amount
01	PICTURE	53
02	COLOR	31
03	BRIGHT	31
04	HUE	31
05	SHARPNESS	7
06	RGB PICTURE	13
07	SUB CONTRAST	ADJ.
08	SUB COLOR	ADJ.
> 09	SUB BRIGHTNESS	ADJ.
10	SUB HUE	7
11	VM LEVEL	3
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.

8. Press **OK** button to get the next selection menu.
9. Press **▼** button and move > to the adjustment item and press **OK** button.
10. Press **▲** and **▼** buttons to change the data in order to comply with each standard.
11. Press **OK** button to write data.
12. Turn off the power to quit service mode when adjustments are completed.

CXA1587S

Item No.	Adjustment Item	Data Amount
01	PICTURE	53
02	COLOR	31
03	BRIGHT	31
04	HUE	31
05	SHARPNESS	7
06	RGB PICTURE	13
07	SUB CONTRAST	ADJ.
08	SUB COLOR	ADJ.
09	SUB BRIGHT	ADJ.
10	SUB HUE	7
11	VM LEVEL	3
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.
16	G-AUTO CUT OFF	ADJ.
17	B-AUTO CUT OFF	ADJ.
18	R-MANUAL CUT OFF	ADJ.
19	G-MANUAL CUT OFF	ADJ.
20	B-MANUAL CUT OFF	ADJ.
21	GAMMA LEVEL	0
22	DC TRANSFER RATIO	3
23	DYNAMIC PICTURE	2
24	Y FILTER ADJ	ADJ.
25	Y DELAY TIME	15
26	Y DELAY SWITCH 1	0
27	Y DELAY SWITCH 2	1
28	SHARPNESS LIMIT	ON
29	ALL BLK	OFF
30	H SHIFT	32
31	DAC TEST	OFF
32	PRE/OVER SHOOT	7
33	SHARPNESS FO	2
34	SUB SHARPNESS	3
35	R MUTE	OFF
36	G MUTE	OFF
37	B MUTE	OFF
38	AGING 1	OFF
39	AGING 2	OFF
40	AKB	ON
41	INHIBIT RGB	OFF
42	FORCED RGB	OFF
43	V/2 V	OFF
44	AXIS	PAL
45	HUE SW	OFF
46	V EXTENTION	OFF

47	AFC 1	1
48	AFC 2	0
49	AFC	ON
50	REF. POSITION	0

CXA1526 (KP-S4113 only)

Item No.	Adjustment Item	Data Amount
01	DC SHIFT	32
02	UPPER Y BOW	4
03	LOWER Y BOW	5
04	H. AMP	48
05	H TILT	29
06	UPPER COR BOW	32
07	UPPER TILT	32
08	LOWER COR BOW	32
09	LOWER TILT	32

CXD2018Q

Item No.	Adjustment Item	Data Amount
01	V SIZE	No ADJ.
02	V SHIFT	No ADJ.
03	S CORRECTION	No ADJ.
04	V LINEARITY	No ADJ.
05	H SIZE	No ADJ.
06	PIN AMP	No ADJ.
07	TILT	No ADJ.
08	UPPER CORNER	No ADJ.
09	LOWER CORNER	No ADJ.
10	V BOW	No ADJ.
11	ANGLE	No ADJ.
12	HV COMP. V	13
13	HV COMP. H	8
14	FRAME SHIFT	OFF
15	FREE RUN 60 Hz	OFF
16	SYSTEM 60 Hz	OFF
17	ASPECT WIDE	OFF
18	DOUBLE SCAN	OFF
19	NON INTERLACE	ON
20	H SHIFT	32
21	N/S CORRECTION	No ADJ.

Typical On Screen Display based values when receiving PAL Phillips pattern.

TDA6612	Adjustment item	Data Amount
	Stereo-Separation	30

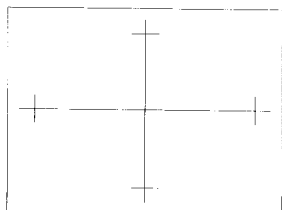
Should be adjusted twice 4 : 3 and 16 : 9 mode.

CX 7948A

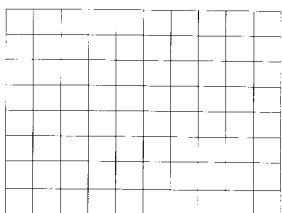
Cross Bar (off)
Mesh (off)
Fine Mesh (off)

Select ▲ ▼ and press O.K.

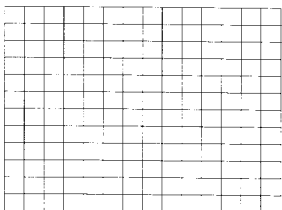
Cross Bar (on)



Mesh (on)



Fine Mesh (on)



Y FILTER ADJUSTMENT

1. Input a PAL RED pattern from the pattern generator.
2. Connect an oscilloscope to pin ① (R OUT) of CN0123 on the A board.
3. Enter into the service mode and select item 24 Y Filter Adjustment of CXA1587S.
4. Adjust data ▲ or ▼ to minimize the chroma element of CN0123 ① pin.
5. Press O.K. button to write the data.

SUB BRIGHTNESS ADJUSTMENT

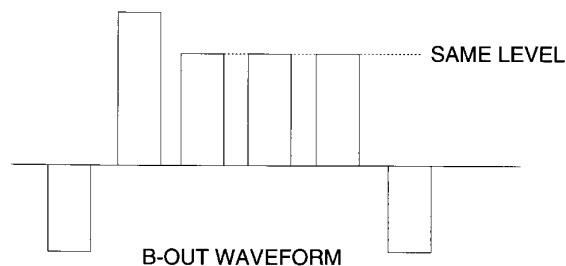
1. Input a Phillips pattern.
2. Enter into the service mode and select item 09 SUB BRIGHTNESS of CXA1587S.
3. Adjust the data so that 0-IRE of grey scale and CUT-OFF 20-IRE are only slightly visible on screen.
4. Press the O.K. button to write the data.

SUB CONTRAST ADJUSTMENT

1. Input a video that contains a small 100% area on a Black background.
2. Enter into the service mode and press 01 to have PIC max followed by 21.
3. Adjust the data so that 2.5 Vp-p can be obtained at pin ① of CN0123 (R out).

SUB COLOR ADJUSTMENT

1. Input a PAL color bar signal.
2. Connect an oscilloscope to pin ① of CN0125 (B OUT) on the A board.
3. Enter into the service mode and press 22 of CXA1587S, 8 SUB COLOR.
4. Adjust the data so that the right sides of the waveform will be the same.
5. Press the O.K. button to write data.



STEREO-SEPARATION ADJUSTMENT

1. Input a 1kHz stereo signal to the L-ch and a 400Hz stereo signal to the R-ch.
2. Select Stereo-Separation of TDA6612.
3. Adjust the data so that sound is not detected in the R-ch and the L-ch.
4. Press the O.K. button to write the data.

DRIVE AND CUT OFF

See direct test mode list attached and refer to sub brightness or such for adjustment method.

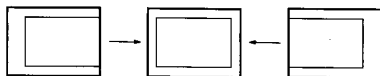
DEFLECTION SYSTEM ADJUSTMENT

1. Enter into service mode and select CXD2018Q.
2. Select and adjust each item in order to obtain the optimum image.

CXD2018Q

Item No.	Adjustment Item	Data Amount
01	V SIZE	No ADJ.
02	V SHIFT	No ADJ.
03	S CORRECTION	No ADJ.
04	V LINEARITY	No ADJ.
05	H SIZE	No ADJ.
06	PIN AMP	No ADJ.
07	TILT	No ADJ.
08	UPPER CORNER	No ADJ.
09	LOWER CORNER	No ADJ.
10	V BOW	No ADJ.
11	ANGLE	No ADJ.
12	HV COMP. V	13
13	HV COMP. H	8
14	FRAME SHIFT	OFF
15	FREE RUN 60 Hz	OFF
16	SYSTEM 60 Hz	OFF
17	ASPECT WIDE	OFF
18	DOUBLE SCAN	OFF
19	NON INTERLACE	ON
20	H SHIFT	32
21	N/S CORRECTION	No ADJ.

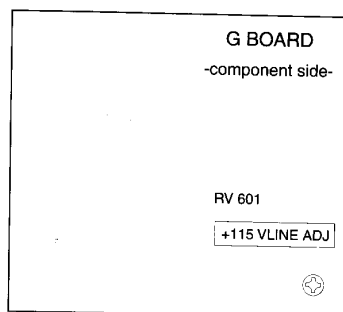
H SHIFT



3. Press **OK** button to write data.

If the menu display prevents accurate adjustment, press **⏏** to clear, to resume, press **⏏** once again.

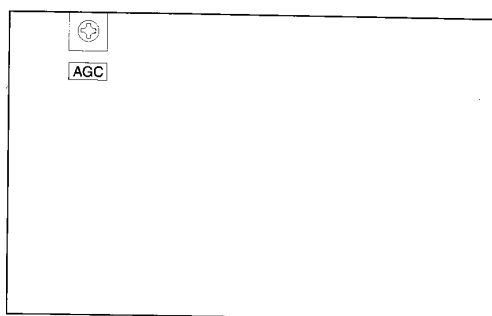
4-2. G BOARD ADJUSTMENT



+115 V LINE ADJUSTMENT (RV601)

1. Input a color-bar signal from the pattern generator.
2. Connect a digital multimeter to pin ⑤ of CN1654.
3. Adjust RV601 so that voltage is $+115\text{ V} \pm 0.5\text{ V}$.

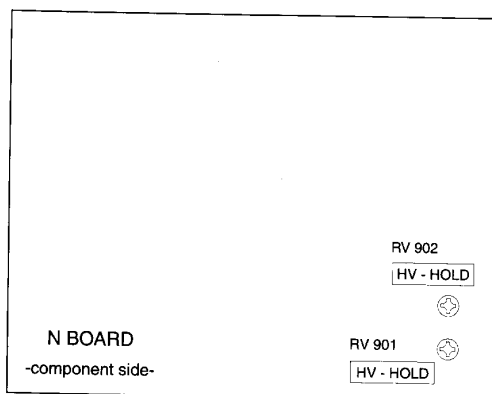
4-3. IF ADJUSTMENT



AGC ADJUSTMENT (IF BLOCK)

1. Receive an off-air signal.
2. Adjust the AGC VR so that there is no snow noise or cross-modulation visible on the screen.
3. Change the receiving channel and confirm status.

4-4. N BOARD ADJUSTMENTS



HV-HOLD DOWN ADJUSTMENT

1. Connect the HV meter.
2. Input a dot pattern signal from the pattern generator.
3. Adjust HV to $33.5 \pm 0.1\text{ KV}$ by RV902.
4. Slowly turn the RV902 till HV-HOLD DOWN operates.
5. Fix the setting of RV902 with RTV.

HV-REGULATOR ADJUSTMENT

1. Connect the HV meter.
2. Input a dot pattern signal from the pattern generator.
3. Adjust HV to $31.5 \pm 0.1\text{ KV}$ by RV901.
4. Fix the setting of RV901 with RTV.

4-5. TEST MODE 2 :

Is available by pressing Test button twice, OSD 'TT' appears. The functions described below are available by pressing the two numbers. To release the Test Mode 2, press 0, 10, or 20 twice ... or switch the TV into Stand-by Mode.

00	Switch Test Mode 2 off
01	Picture maximum
02	Picture minimum
03	Volume 35%
04	Volume 50%
05	Volume 65%
06	Volume 80%
07	Aging Condition (Volume, Picture max., Brightness max., Aging 2 Mode of CXA1587S, and TDA2595 are locked to CXA1587S via PIN 34 of μ -Con.)
08	Shipping Condition (Analog Values are RESET due to factory setting, Prog 1 is selected, TT Mode is switched off.)
09	Dummy
10	Tenth entry is deleted.
11	Balance
12	Hue
13-14	Dummy
15	Read factory setting from NVM Read Volume, Balance, Treble, Bass, Brightness, Contrast, Hue, Sharpness, Color values from ROM to the actual used values (Last Power Memory)
16	Save actual used values as RESET values Memorize actual used values Balance, Treble, Bass, Hue, Sharpness at RESET position in NVM.
17	Preset Level for AV Sources
18	Dummy
19	Stereo Separation
20	Tenth entry is deleted.
21	Sub Contrast
22	Sub Color
23	Sub Brightness
24-29	Dummy
30	Tenth entry is deleted.
31	Green Drive
32	Blue Drive
33	Green Cut Off (Auto Cut Off)
34	Blue Cut Off (Auto Cut Off)

35	Red Cut Off (Manual Cut Off) (Auto Cut Off is switched off.)
36	Green Cut Off (Manual Cut Off) (Auto Cut Off is switched off.)
37	Blue Cut Off (Manual Cut Off) (Auto Cut Off is switched off.)
38	Y-Filter adjustment (Trap is switched off and TDA9145 is switched in forced NTSC Mode.)
39	Dummy
40	Tenth entry is deleted.
41	Default setting of CXA1587S. (Only in Prog 99 available)
42	Default setting of CXA2018Q. (Only in Prog 99 available)
43	Default setting of CXA1526. (Only in Prog 99 available)
44	(All Port High) Not yet
45	(All Port High) Not yet
46-48	Dummy
49	Erase the NVM Testbyte (this byte detects already stored NVM's) After selecting this function, switch TV Off and On \rightarrow the NVM will be preset by μ -Controller. (Not the channel data.)

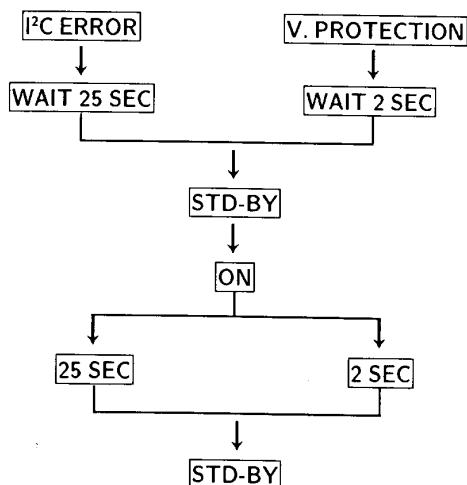
Note: For No. 35, 36, 37 and 38 special pressing (AKB, forced Color Mode, Trap) is selected. After selecting a new Test Mode Number, the AKB is switched ON, the Trap is switched On and TDA9145 is switched to Auto Search Mode.

In Test Mode 2 the Menu display is switchable by Speaker-Off button.

4-6. ERROR MESSAGE

Self diagnosis system can operates as follows.

- When MP can't get the acknowledge back from the device, LED starts flashing according to the table as attached.



In case of more errors in parallel, the blinking error shows max. Priority according to the error number (e.g. error 2 and error 5 appears together, then LEDs shows error 2) .

TABLE OF ERRORS

ERROR COUNT	IC TYPE	FUNCTION
1	I ² C BUS	SDA low
2	X 24 C 16	EEPROM
3	SDA 3202	Tuner PII
4	TDA 9145	Colour decoder
5	CXA 1587	RGB/Jungle
6	TDA 6612	Sound processor
7	CXD 2018	V deflection
8	CXA 1545	AV switch
11	SDA 5248	Text
13		V protection

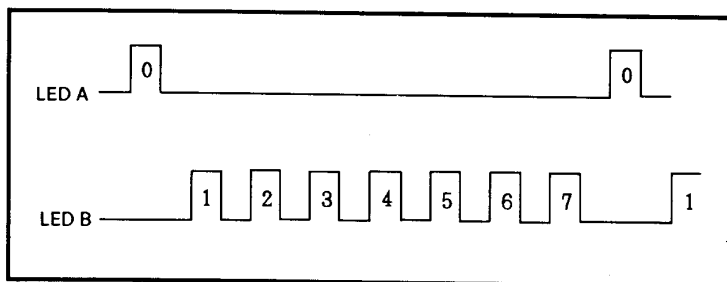
Stand by LED
blinking

No IK return

4-7. ERROR I²C BUS DIAGNOSIS SYSTEM

For all ICs in AP-1E chassis which are necessary to get picture and sound there is a built in error I²C Bus diagnosis system.

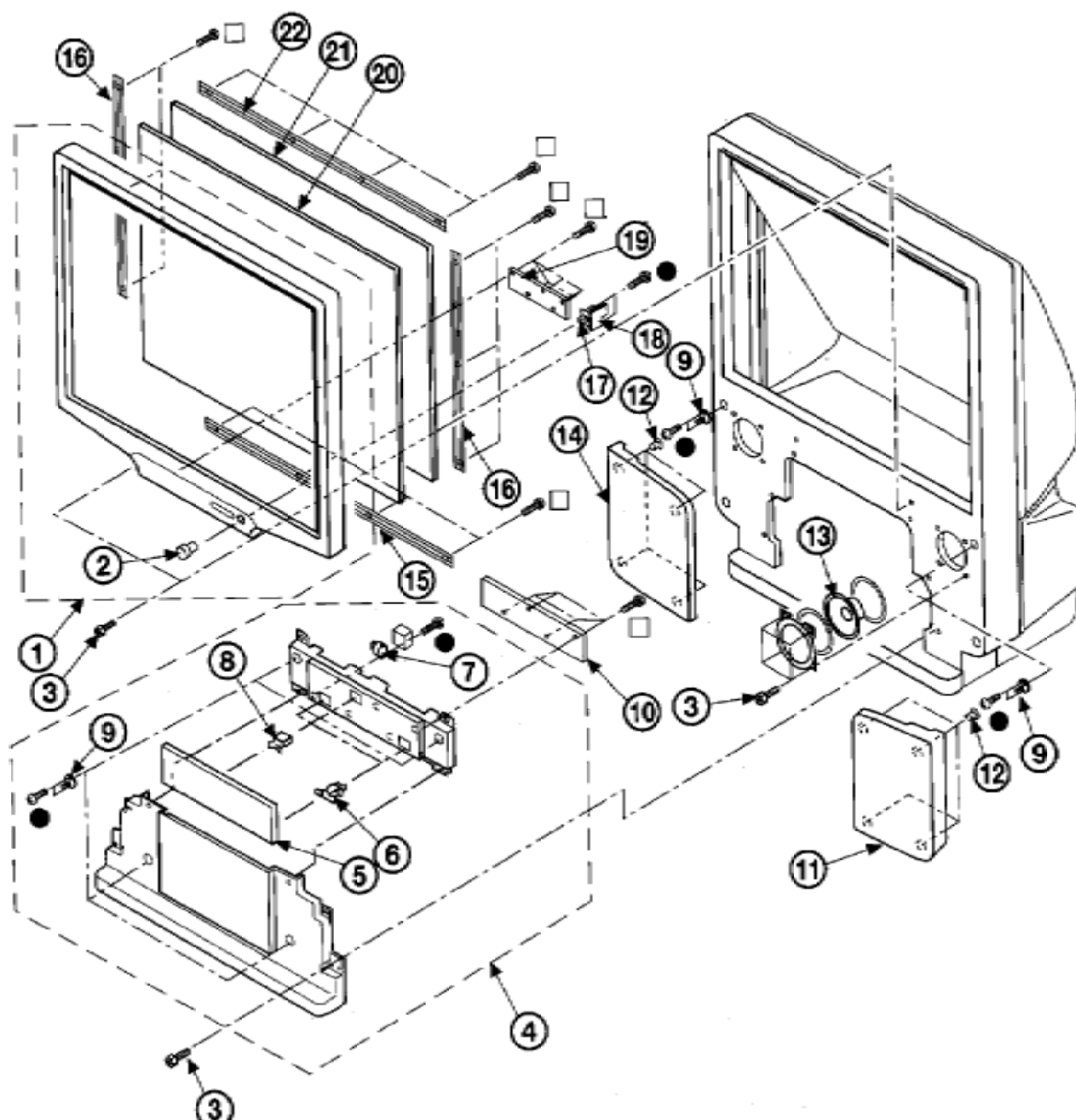
In case of no acknowledge bit, LED A and LED B starts blinking as shown.



6-1. CONTROL PANEL

● : BVTP 3X12 7-685-648-79

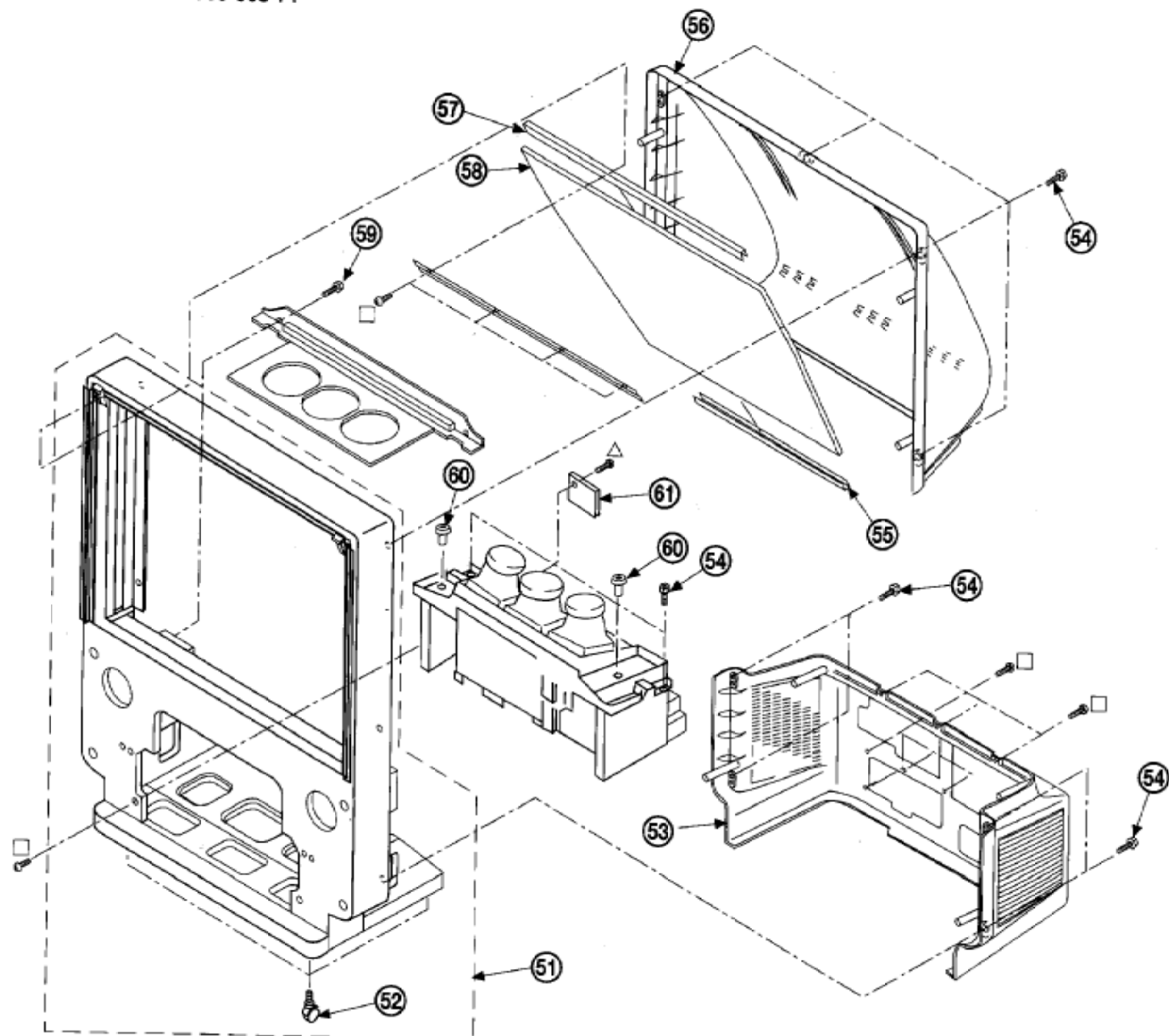
□ : BVTP 4X12 7-685-661-71



6-2. CABINET

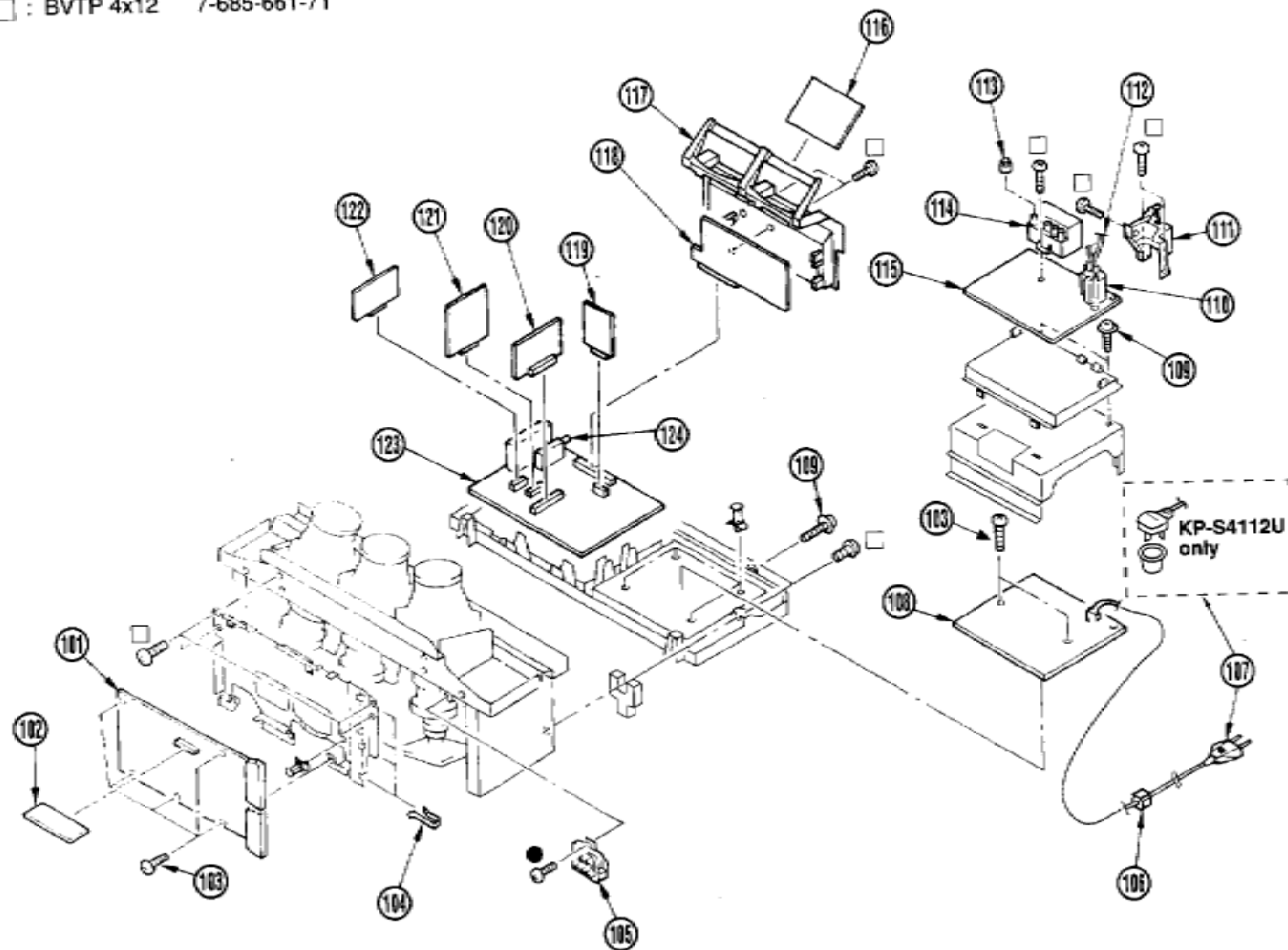
□ : BVTP 4X12 7-685-661-71

△ : BVTP 4X16 7-685-663-71

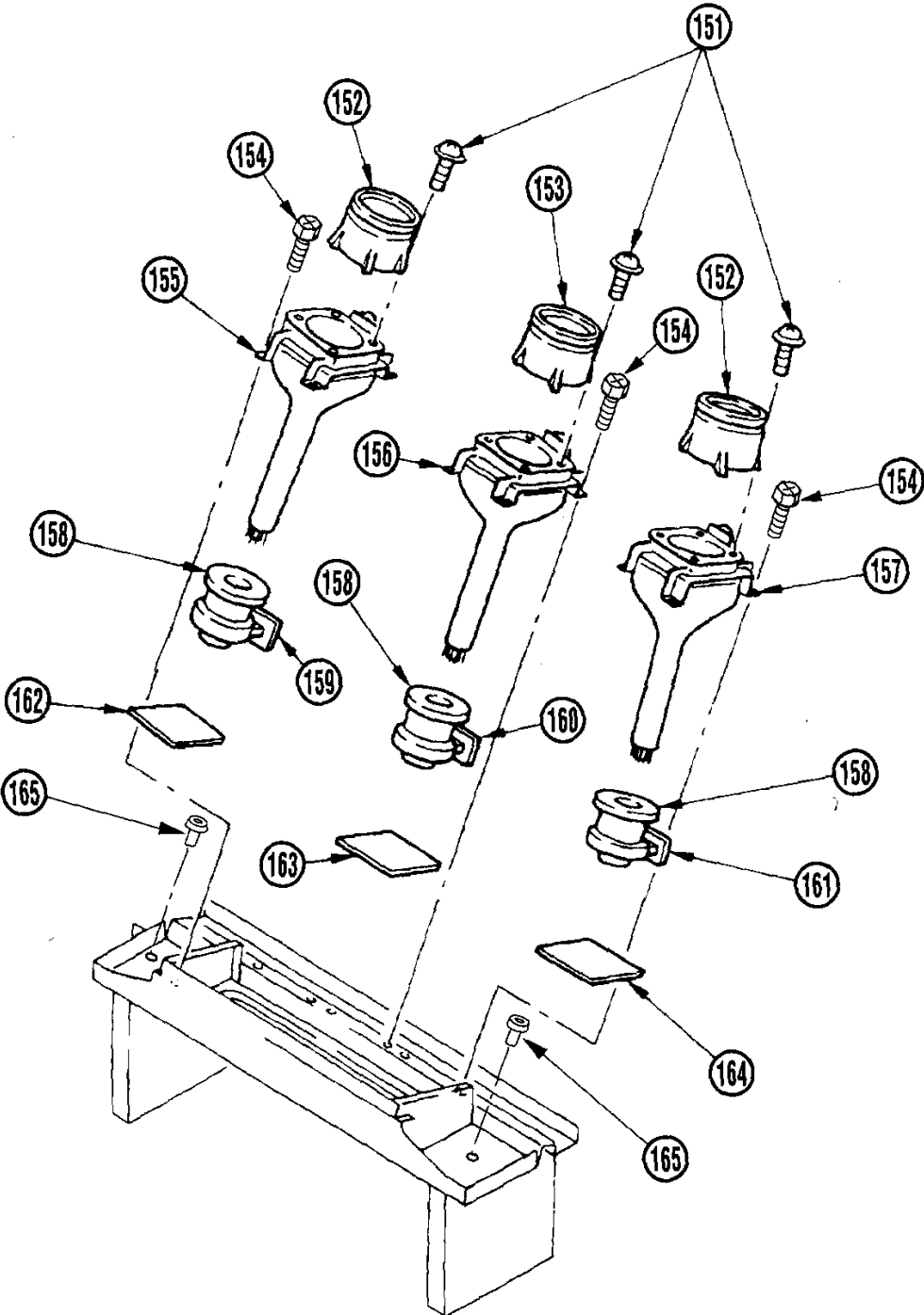


6-3. CHASSIS

- : BVTP 3x12 7-685-648-79
 □ : BVTP 4x12 7-685-661-71

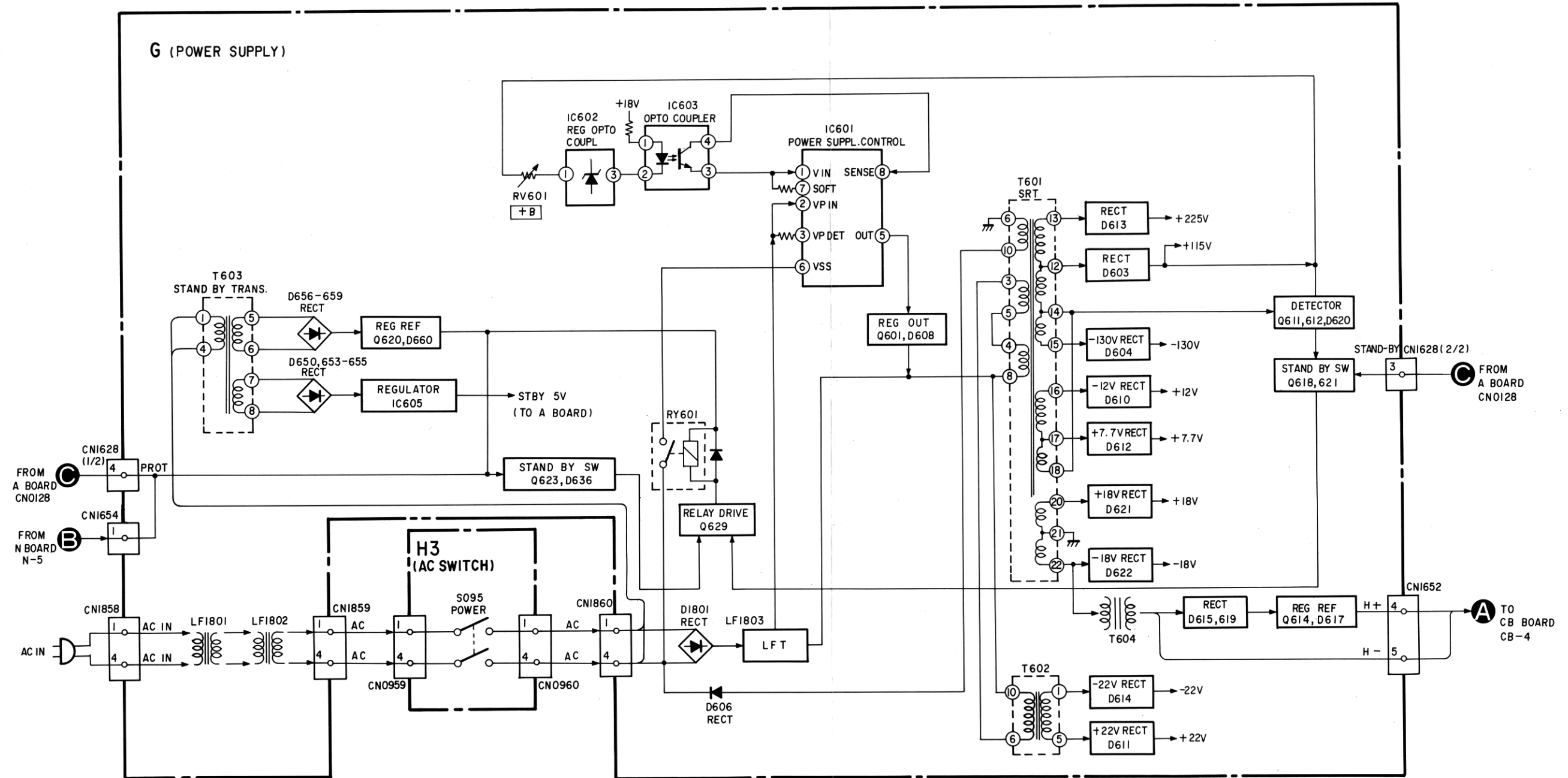


6-4. PICTURE TUBES

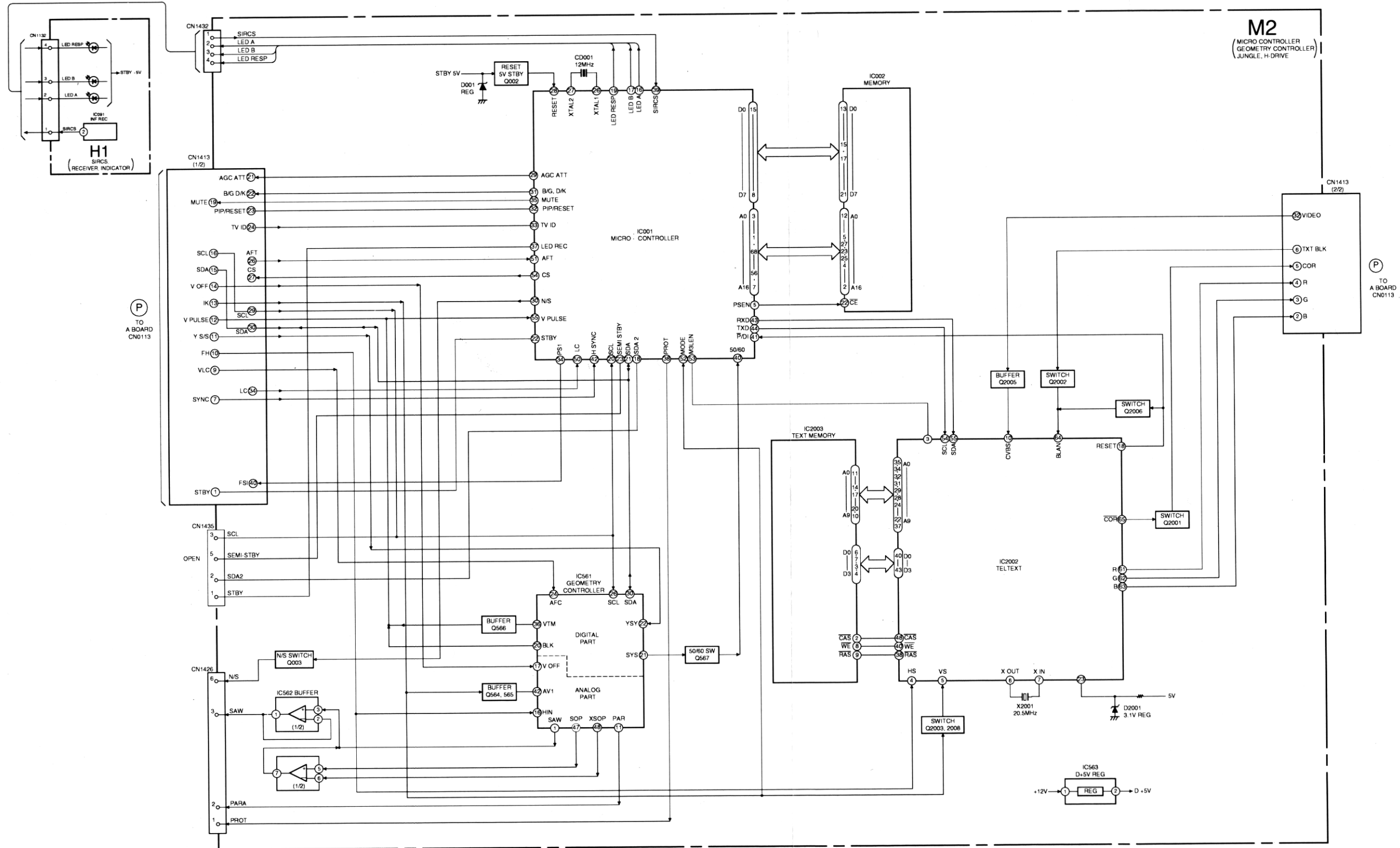


SECTION 5 DIAGRAMS

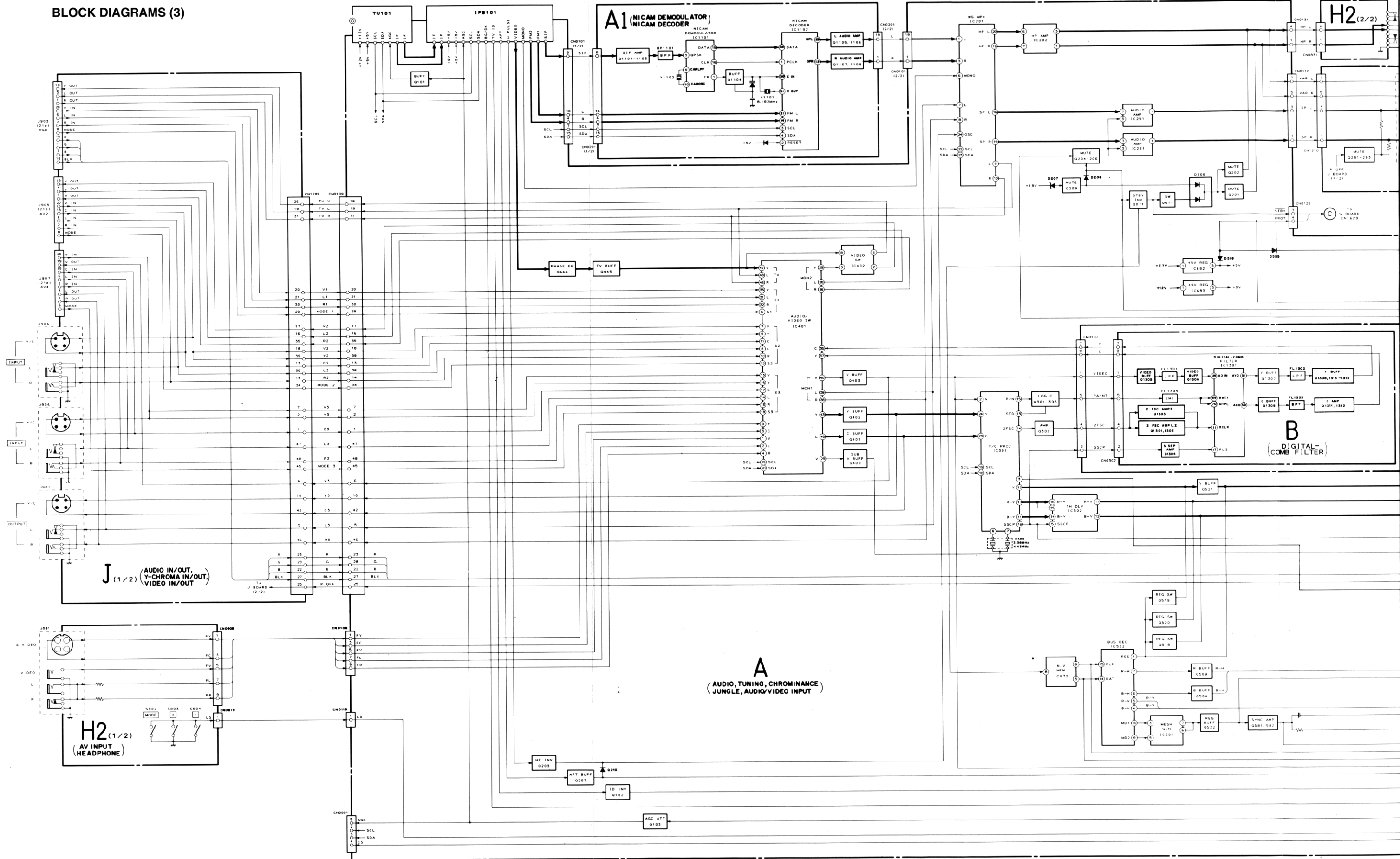
5-1. BLOCK DIAGRAMS (1)

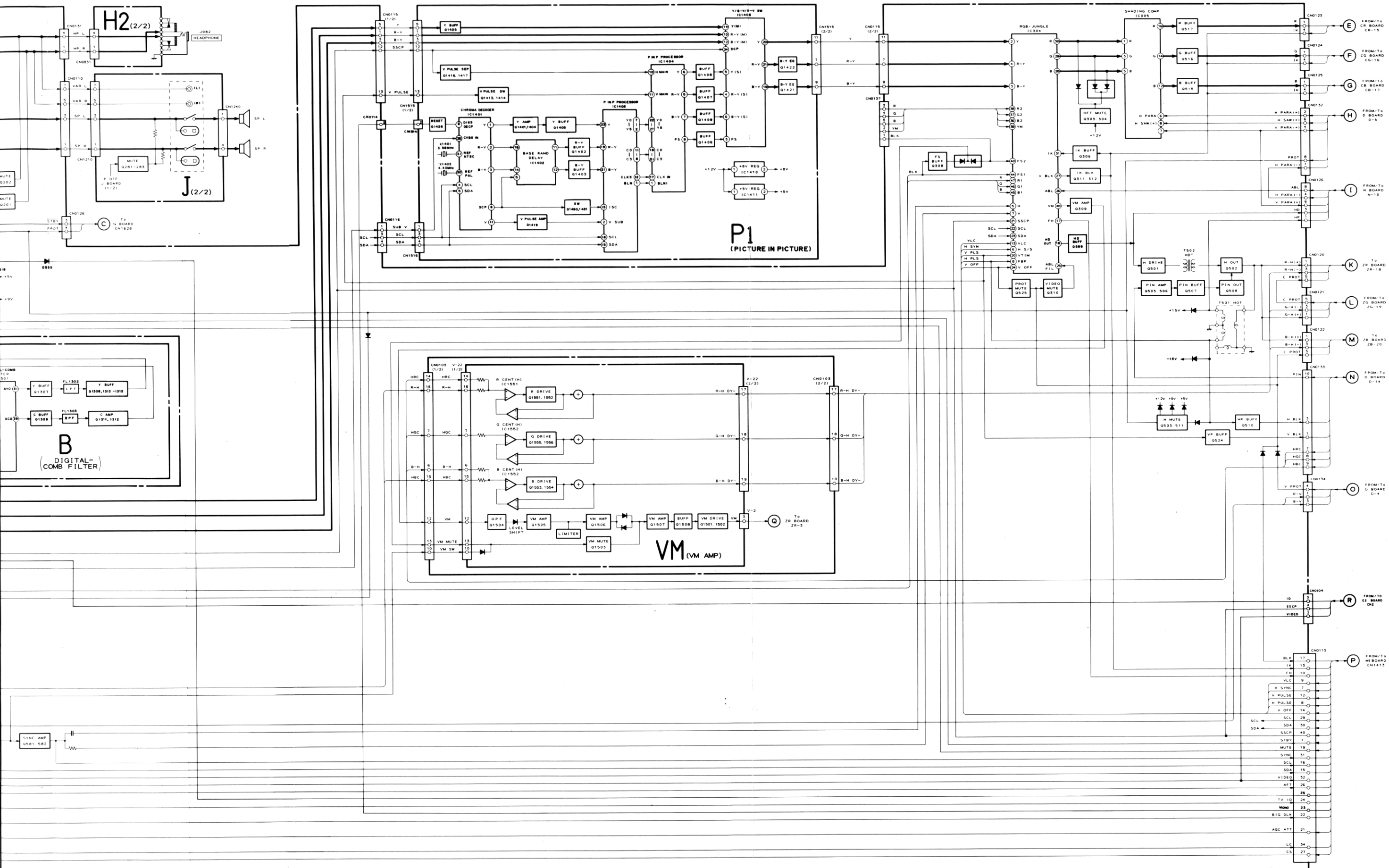


BLOCK DIAGRAMS (2)

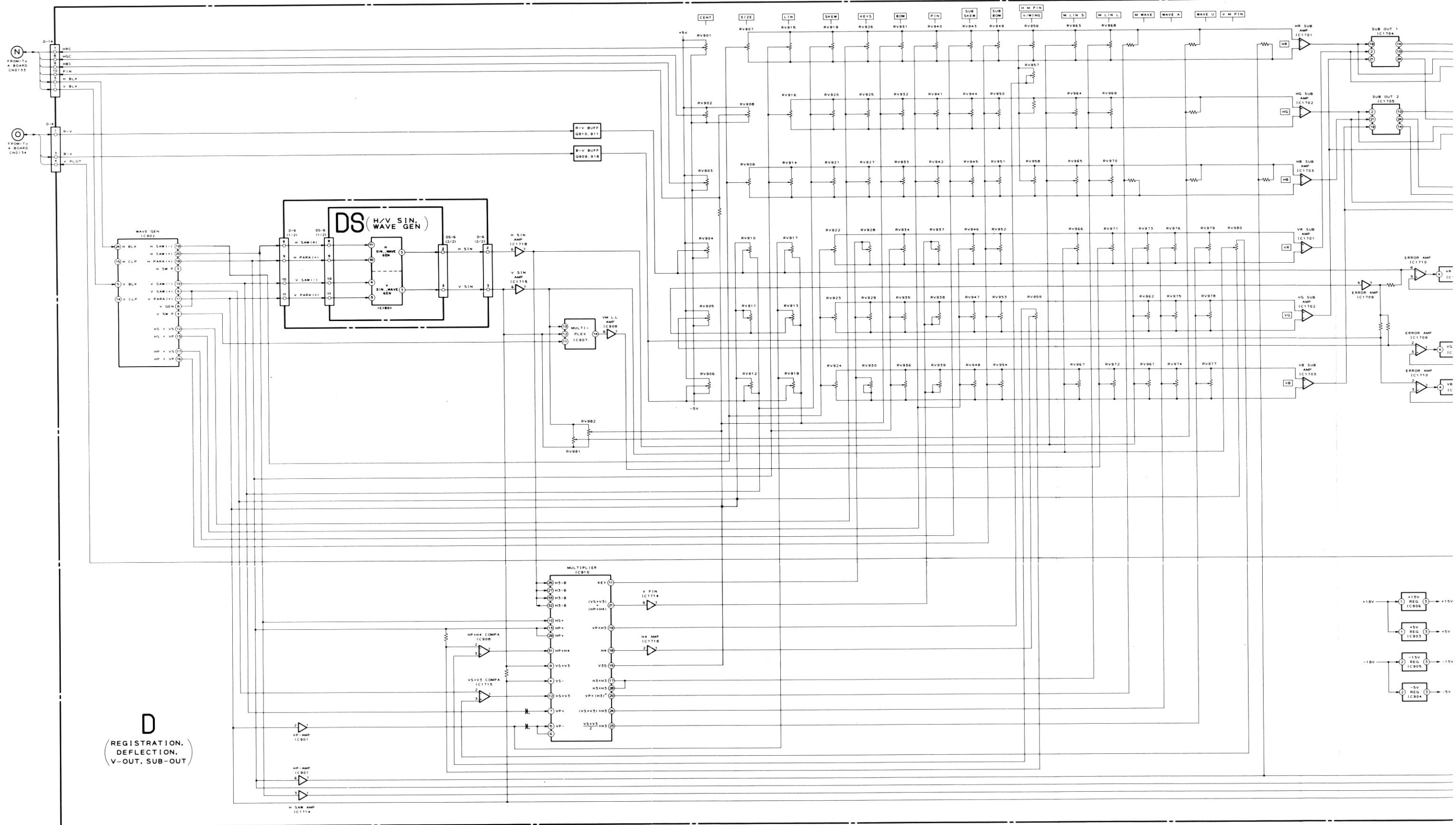


BLOCK DIAGRAMS (3)

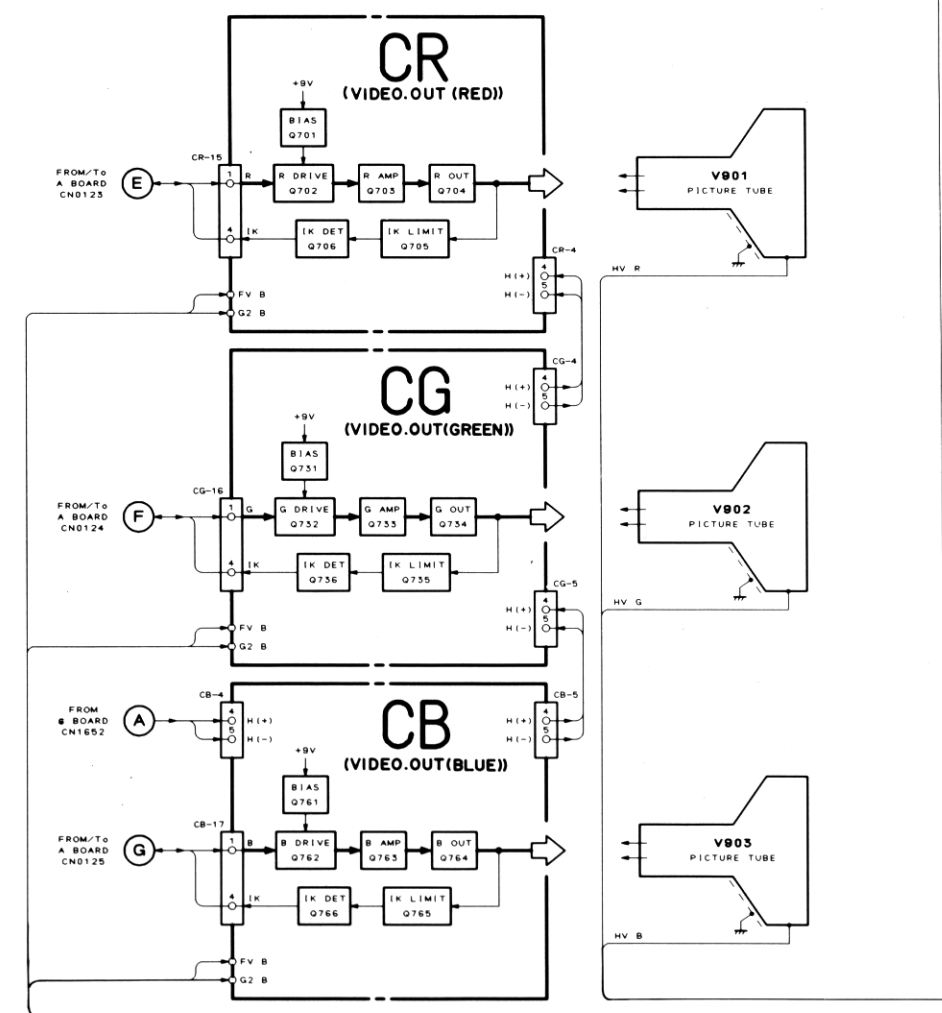
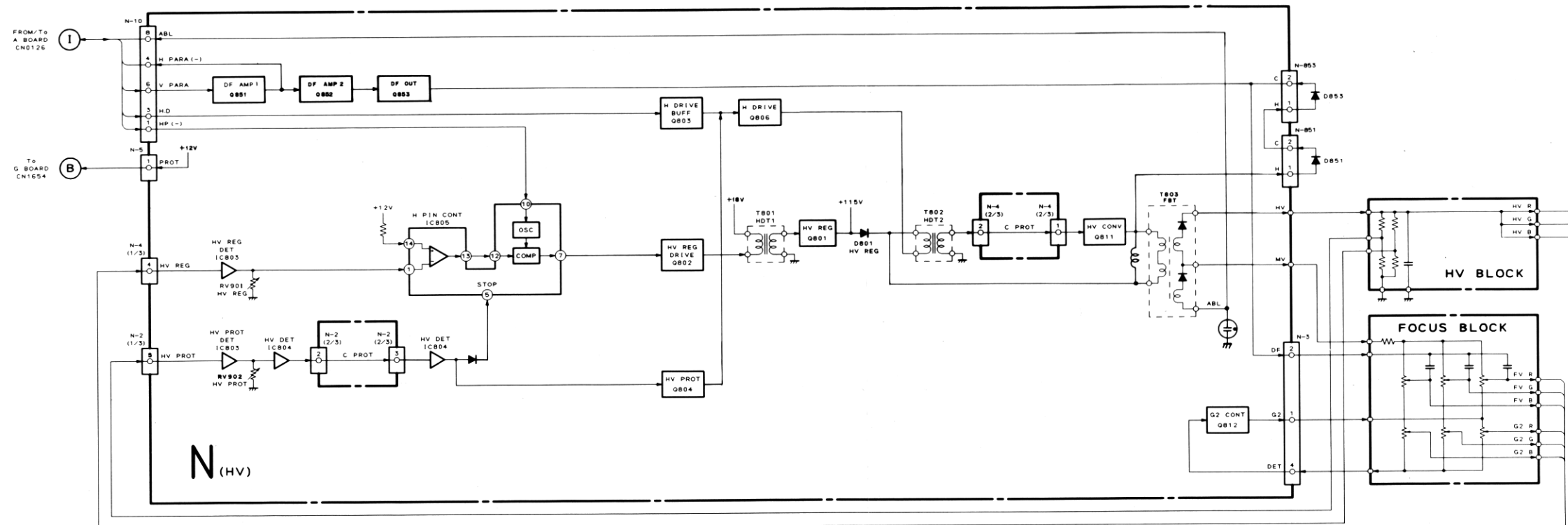




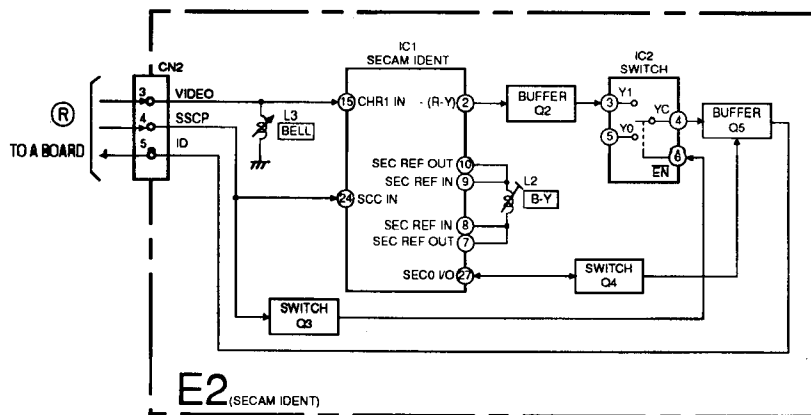
BLOCK DIAGRAMS (4)



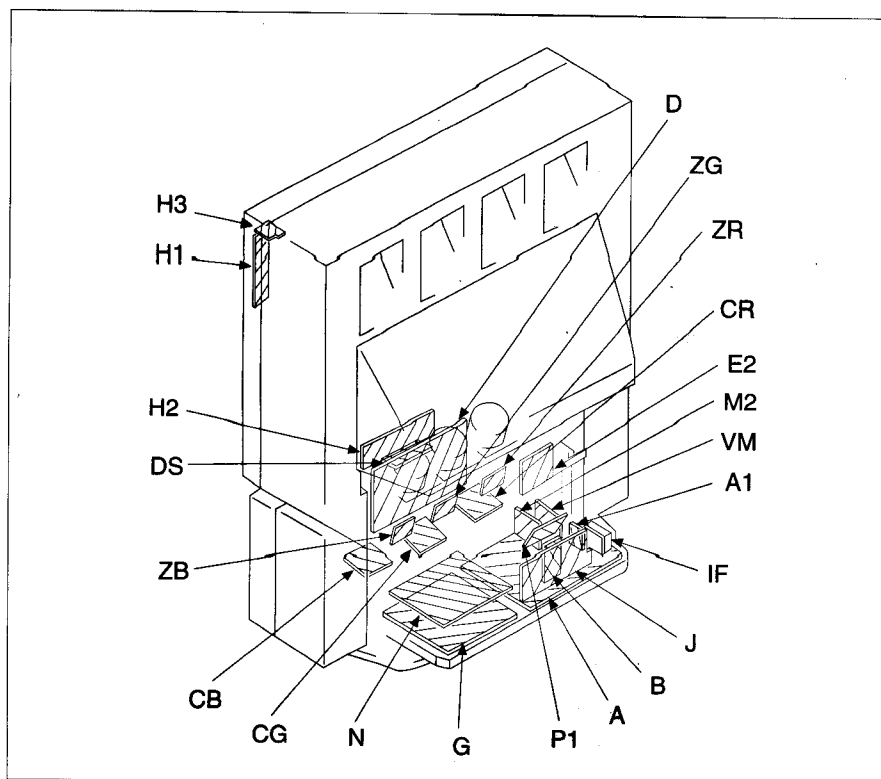
BLOCK DIAGRAMS (5)



BLOCK DIAGRAMS (6)



5-2. CIRCUIT BOARD LOCATION









5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS


Note :

- All capacitors are in μF unless otherwise noted. pF: μF 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
k = 1000 , M = 1000K
- Indication of resistance, which does not have one for rating electrical power, is as follows.


Pitch : 5 mm



Rating electrical power $\frac{1}{4}$ W

-  : nonflammable resistor.
-  : internal component.
-  : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
-  : earth - ground.
-  : earth - chassis.
-  : no mounted.

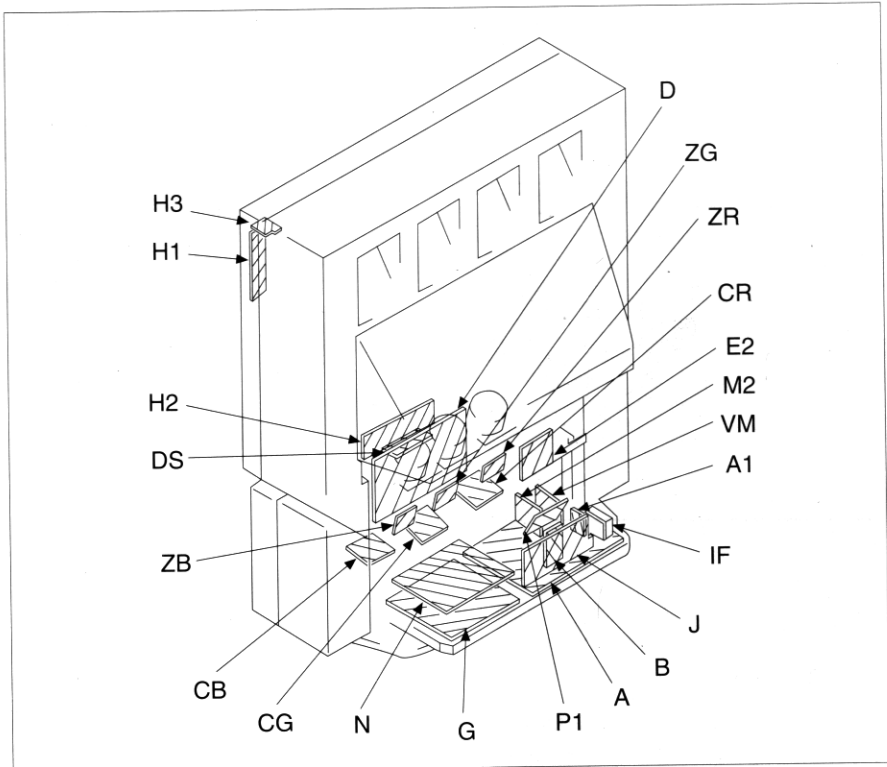
Note : The components identified by shading and marked  are critical for safety. Replace only with part number specified.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
COIL	:  :	ADJUSTABLE RESISTOR
	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

- Readings are taken with a colour-bar signal input.
- Readings are taken with 10M digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
-  : B+ bus.
-  : signal path. (RF)

5-2. CIRCUIT BOARD LOCATION



5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note :

- All capacitors are in μF unless otherwise noted. pF : μF 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
 $k = 1000$, $M = 1000K$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm
Rating electrical power $\frac{1}{4}$ W

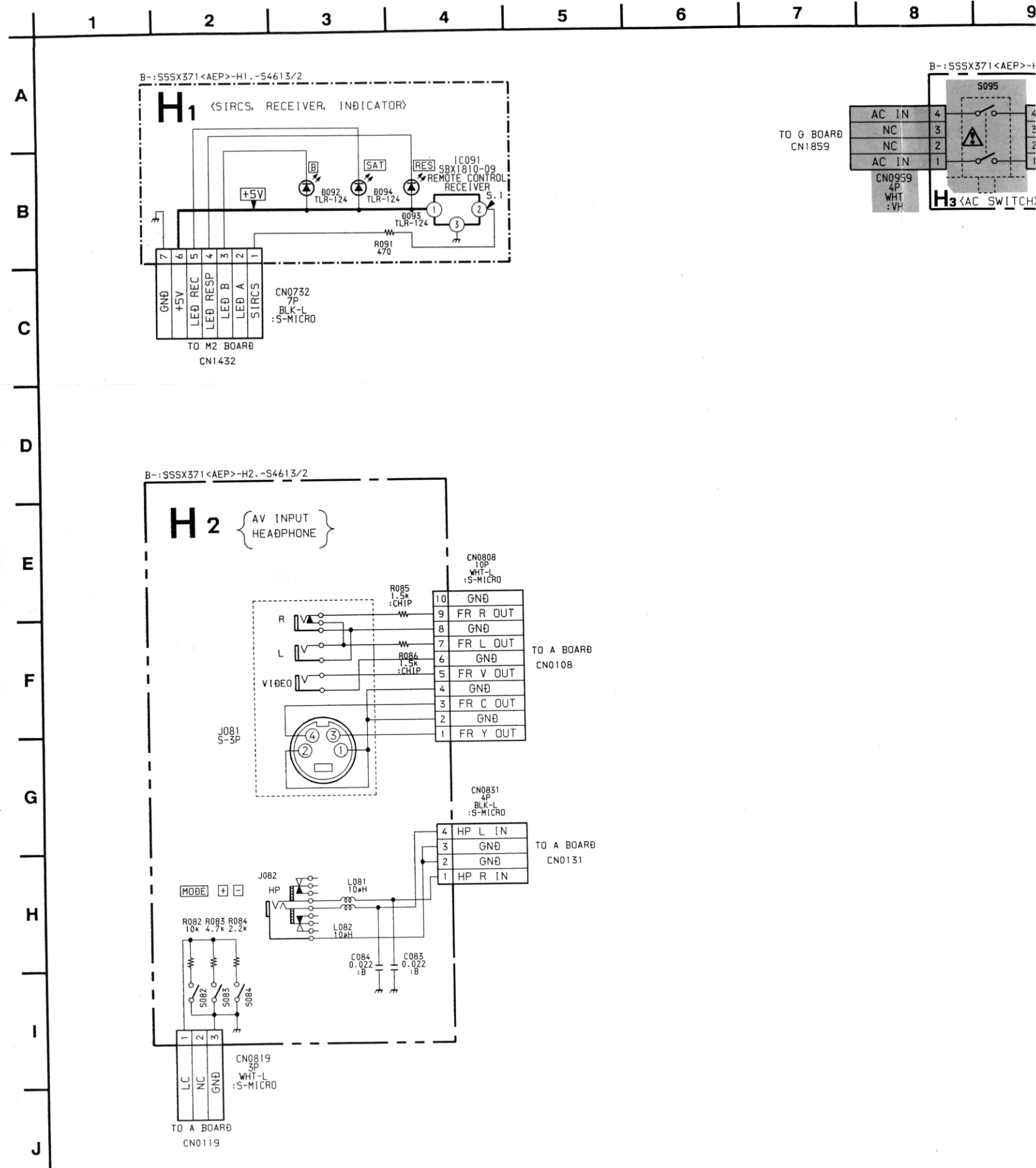
- : nonflammable resistor.
- : internal component.
- : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth - ground.
- : earth - chassis.
- : no mounted.

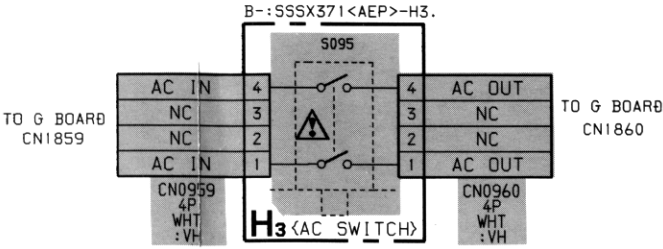
Note : The components identified by shading and marked are critical for safety. Replace only with part number specified.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: RW	NONFLAMMABLE WIREWOUND
	: \times	ADJUSTABLE RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
	: TA	TANTALUM
CAPACITOR	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

- Readings are taken with a colour-bar signal input.
- Readings are taken with 10M digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- : B+ bus.
- : signal path. (RF)





H1

[SIRCS, RECEIVER, INDICATOR]

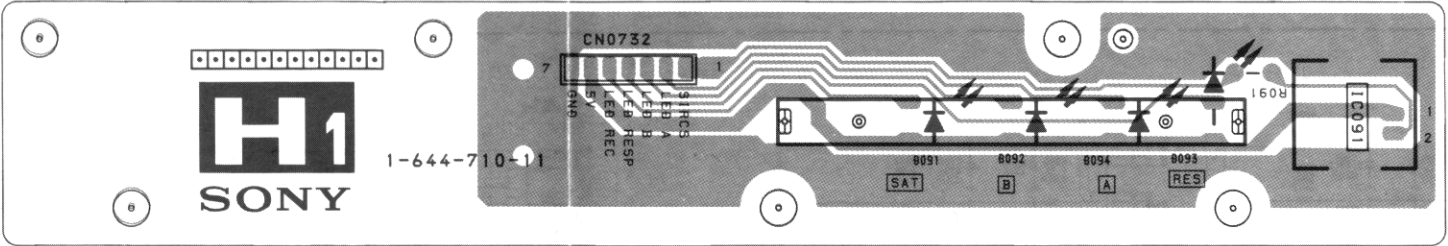
H2

[AV INPUT HEADPHONE]

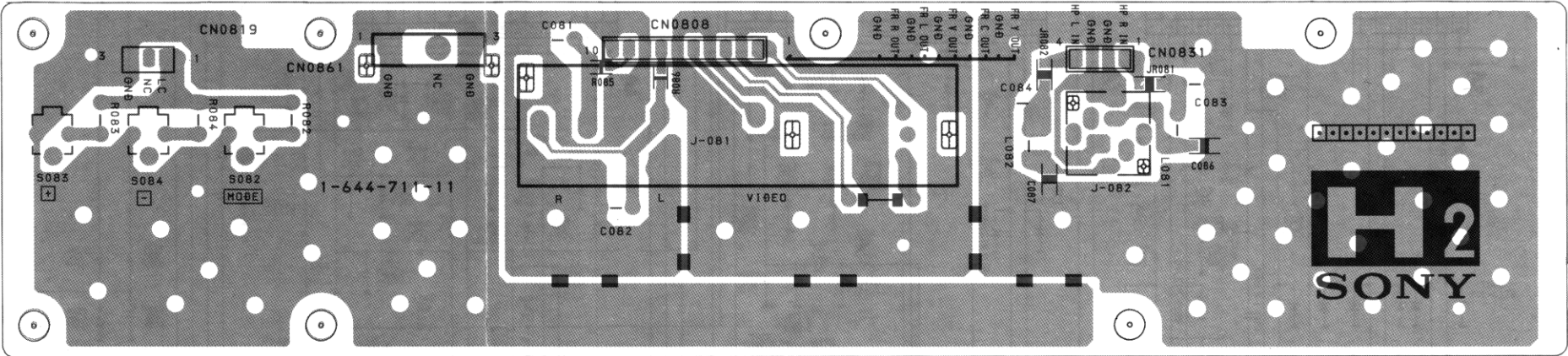
H3

[AC SWITCH]

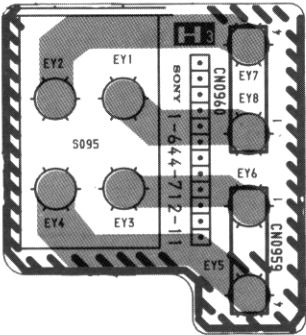
— H1 BOARD —

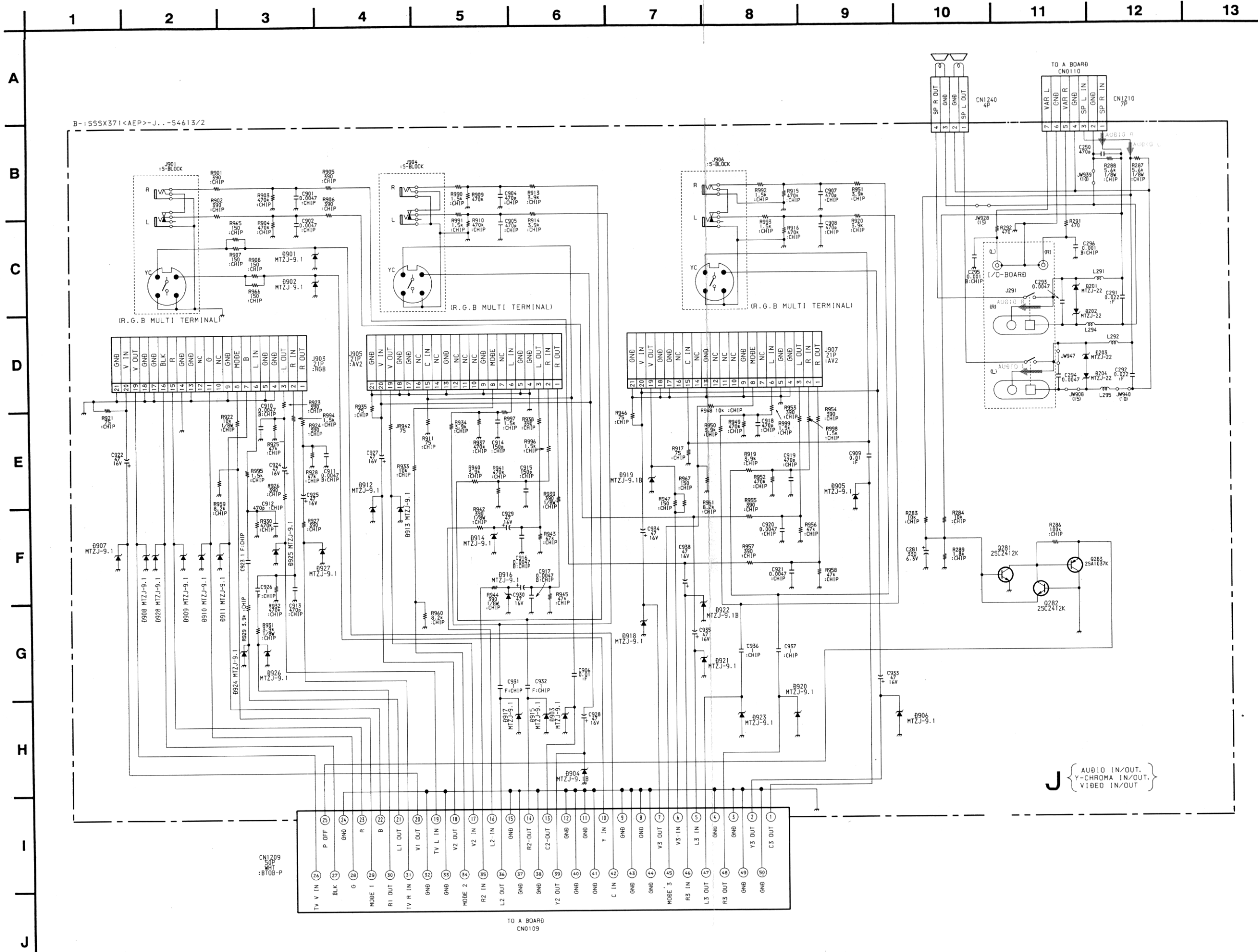


— H2 BOARD —

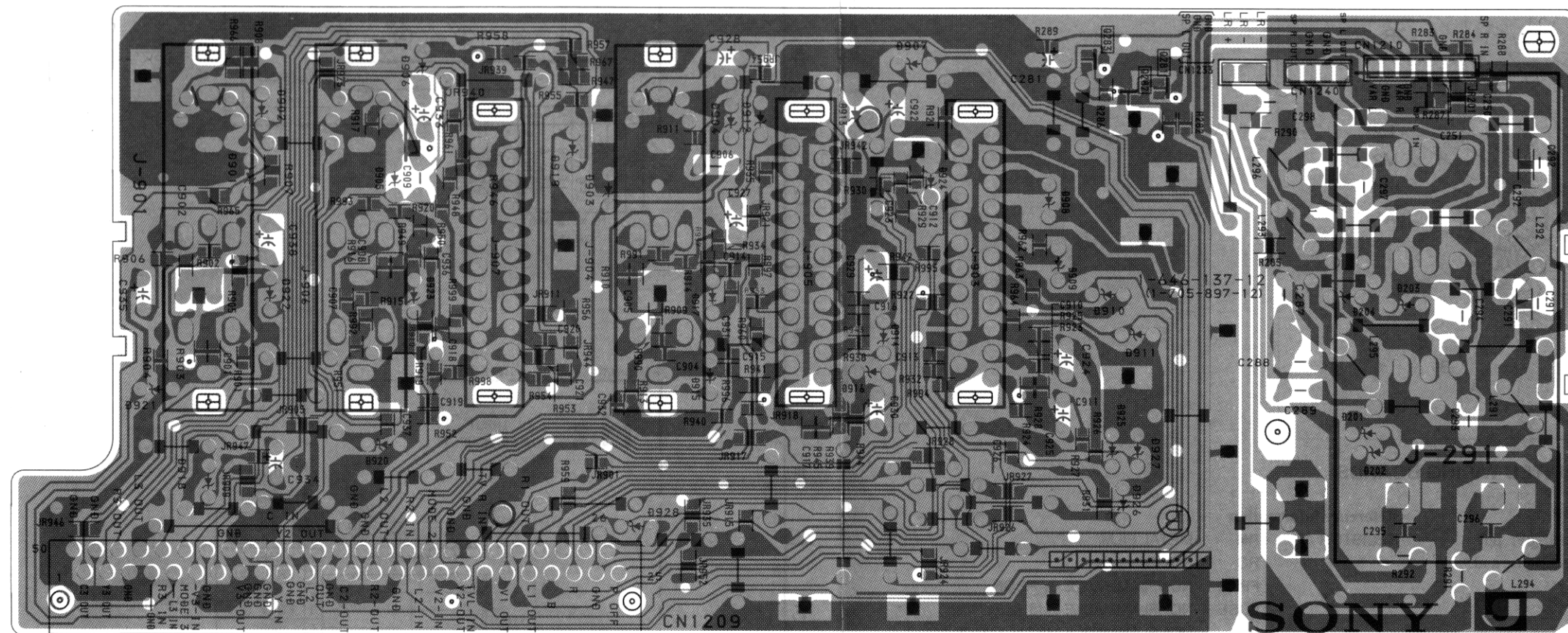


— H3 BOARD —

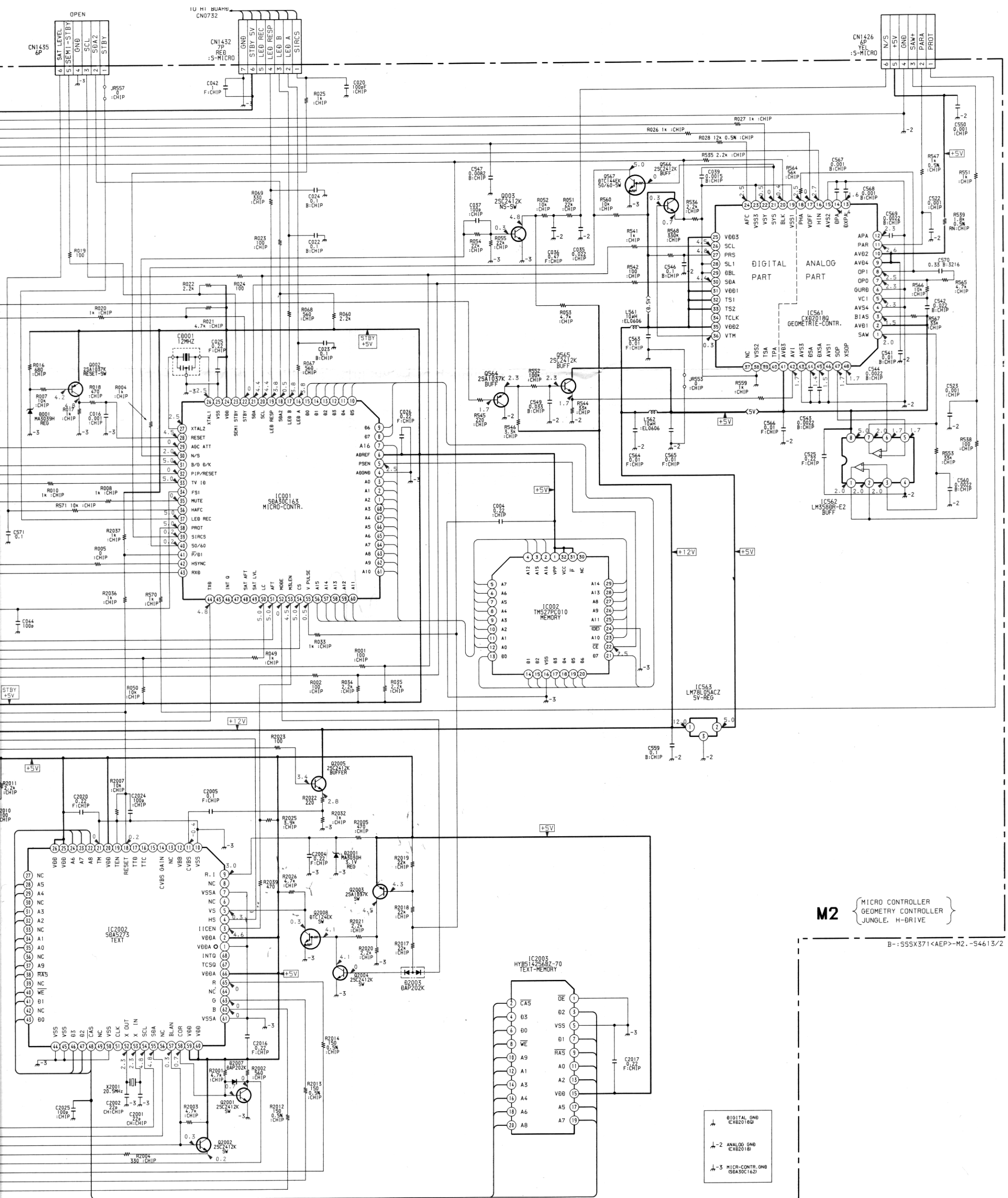




— J BOARD —



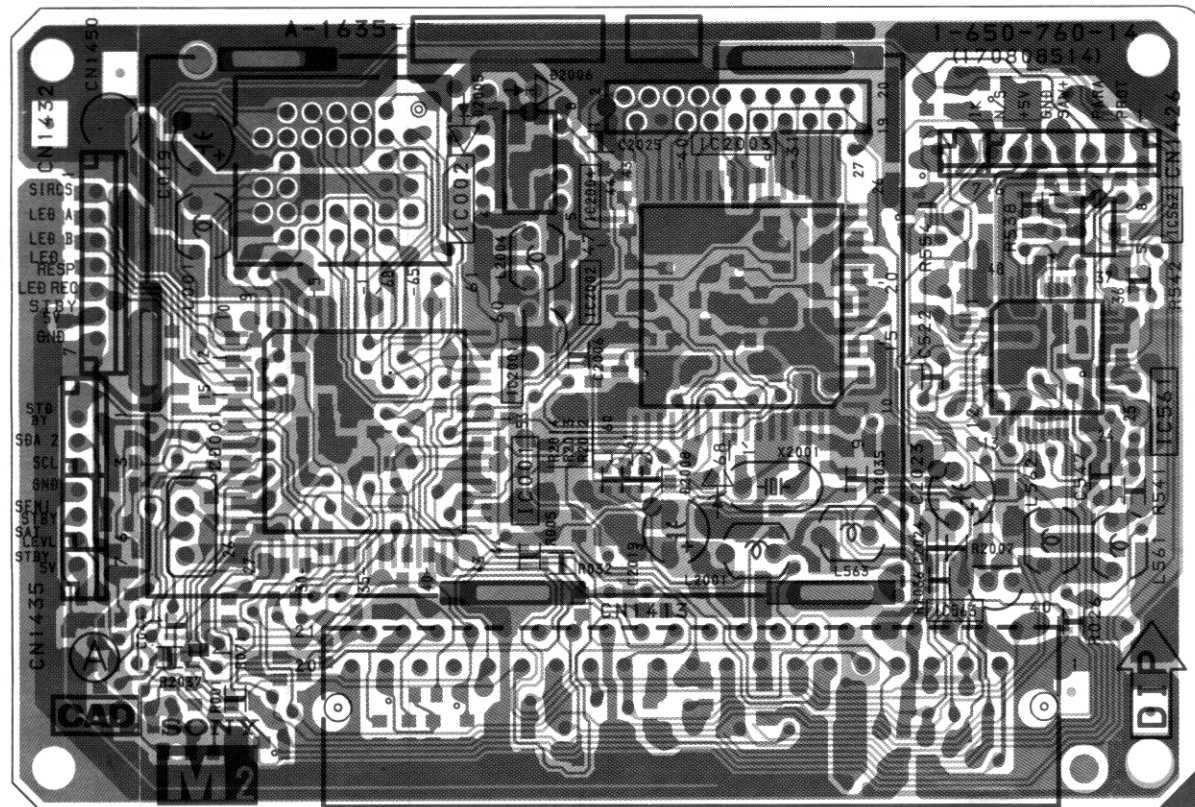
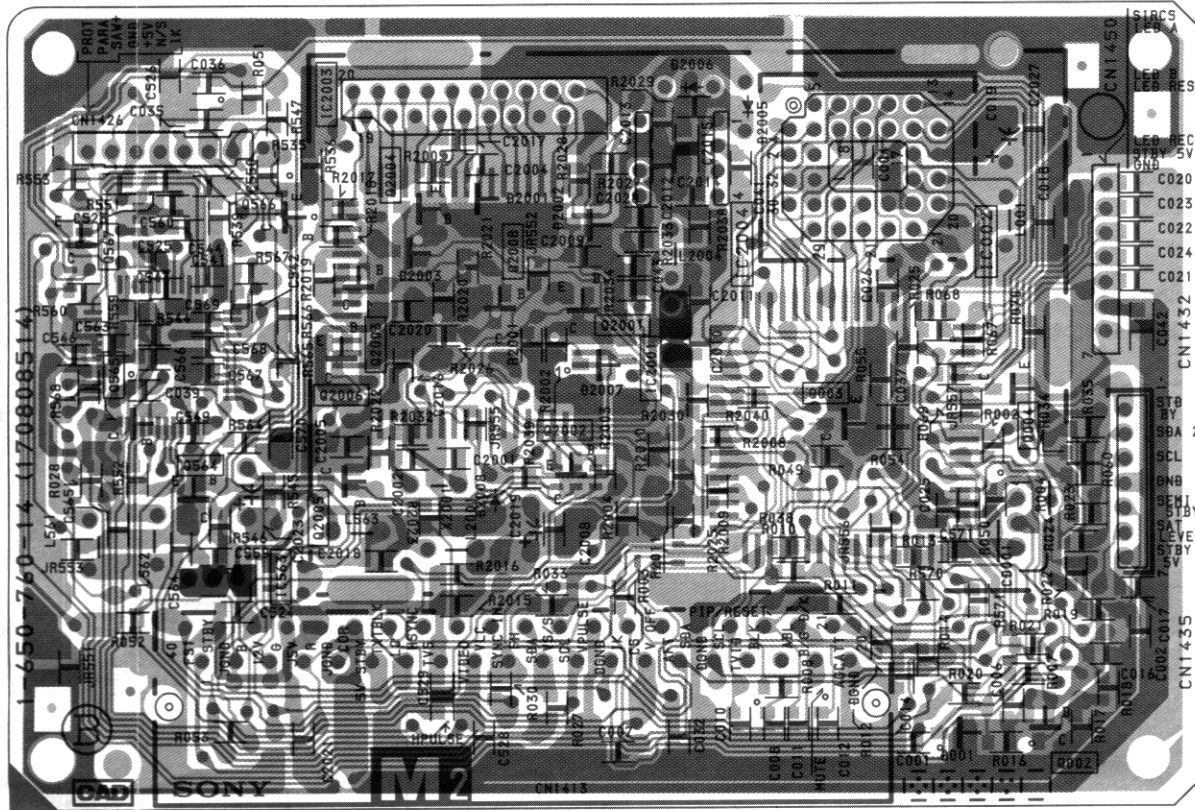
- : Pattern from the side which enables seeing.
- : Pattern of the rear side.



M2

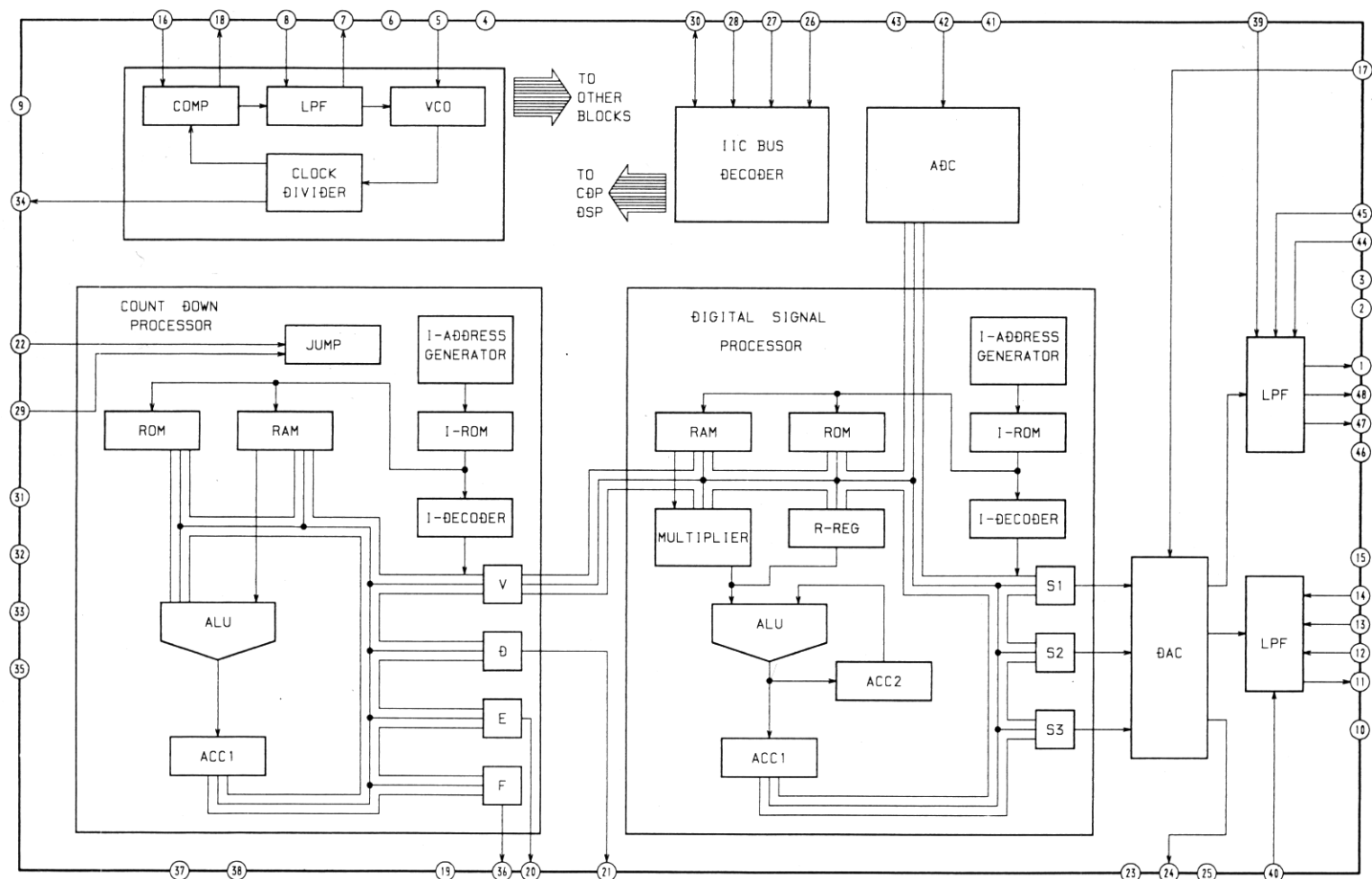
MICRO-CONTROLLER,
GEOMETRY CONTROLLER
JUNGLE, H-DRIVE

— M2 BOARD —

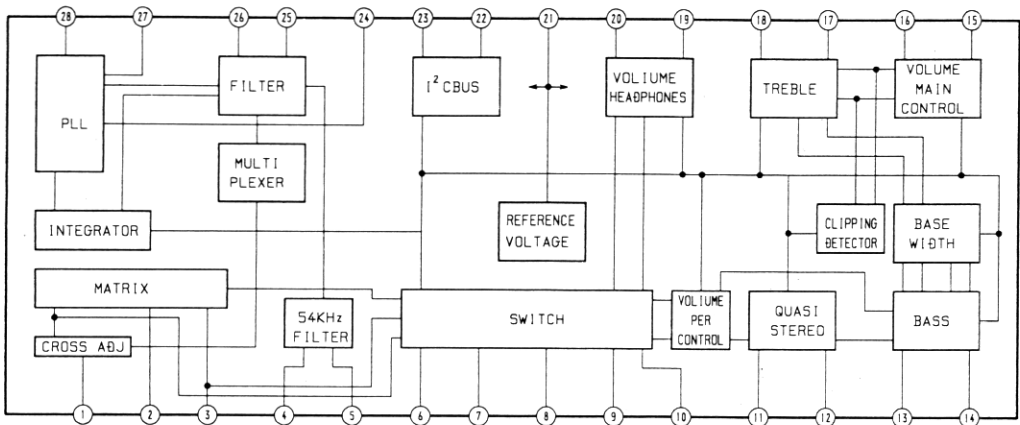


- : Pattern from the side which enables seeing.
- : Pattern of the rear side.

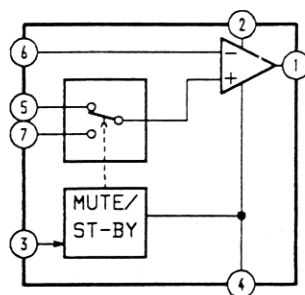
M2 BOARD IC561 CXD2018Q



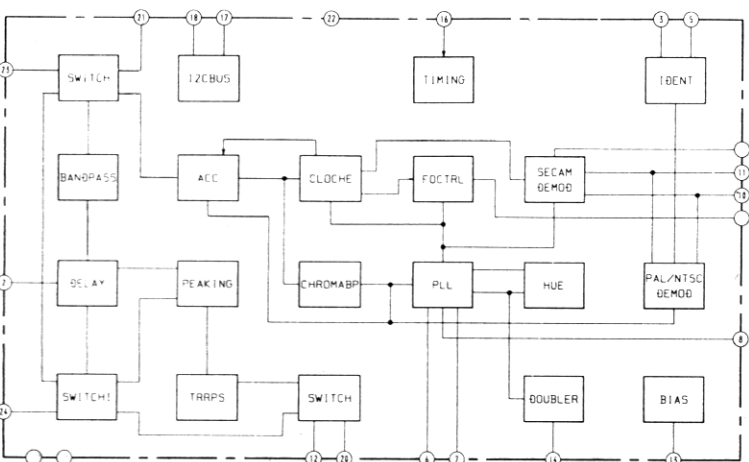
A BOARD IC201 TDA6612-5



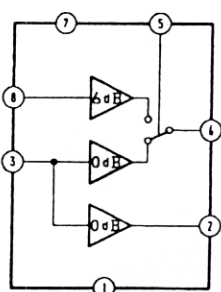
A BOARD IC251, 261 TDA2052



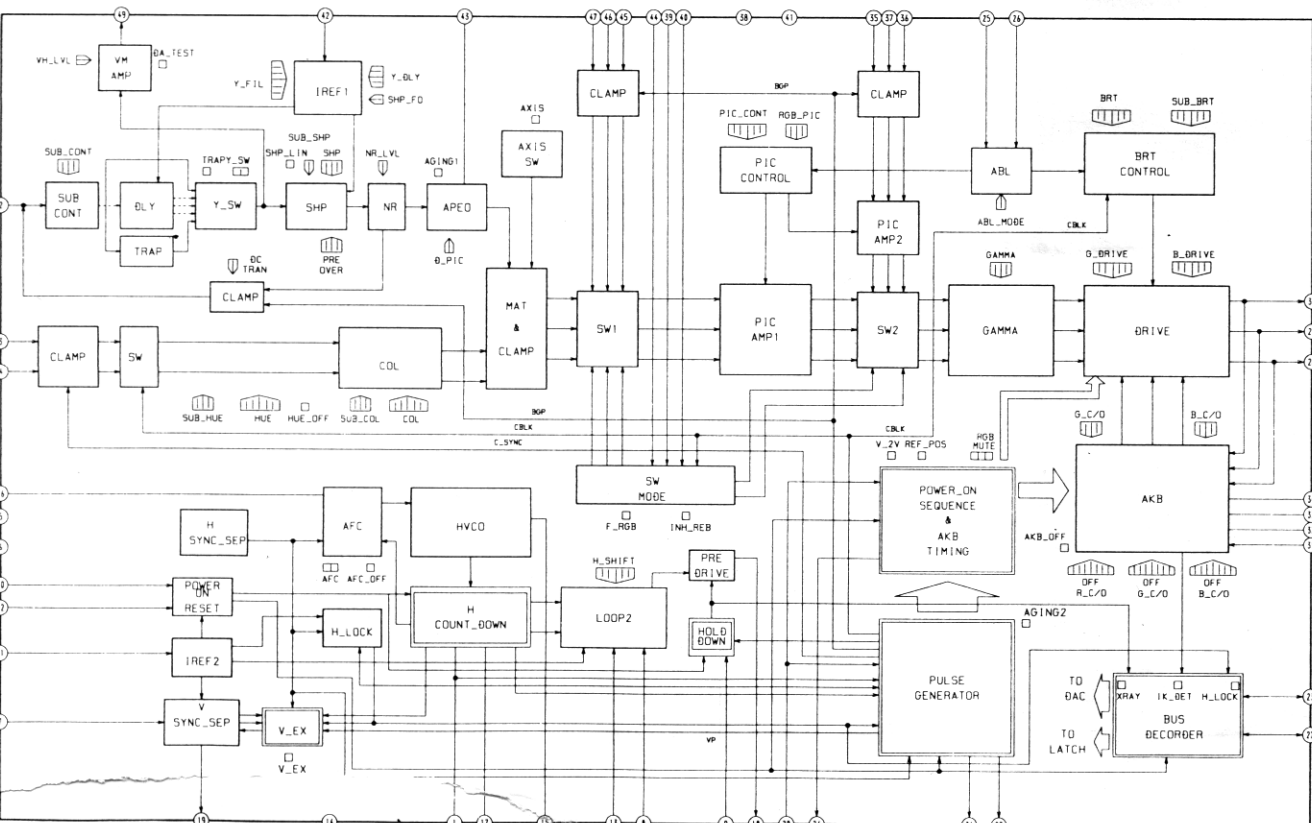
A BOARD IC301 TDA9145/N2B



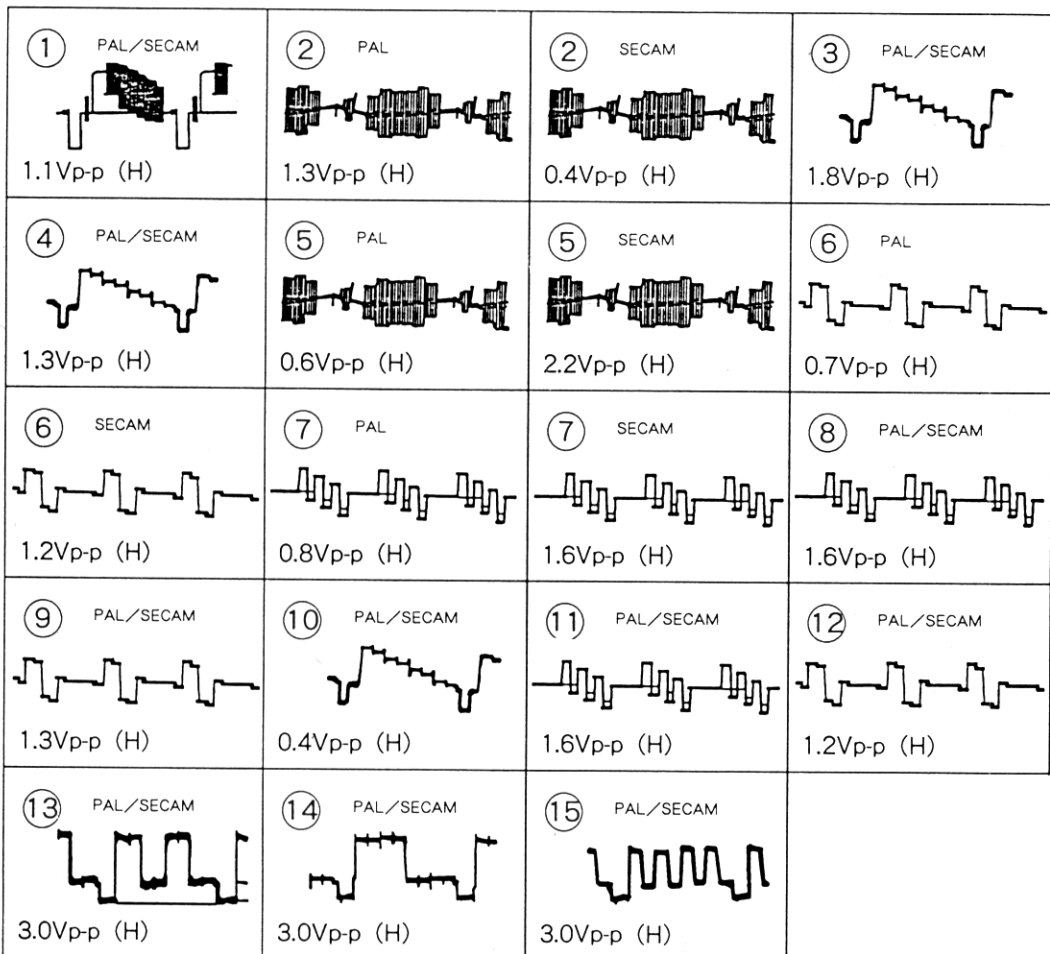
A BOARD IC402 TEA2114

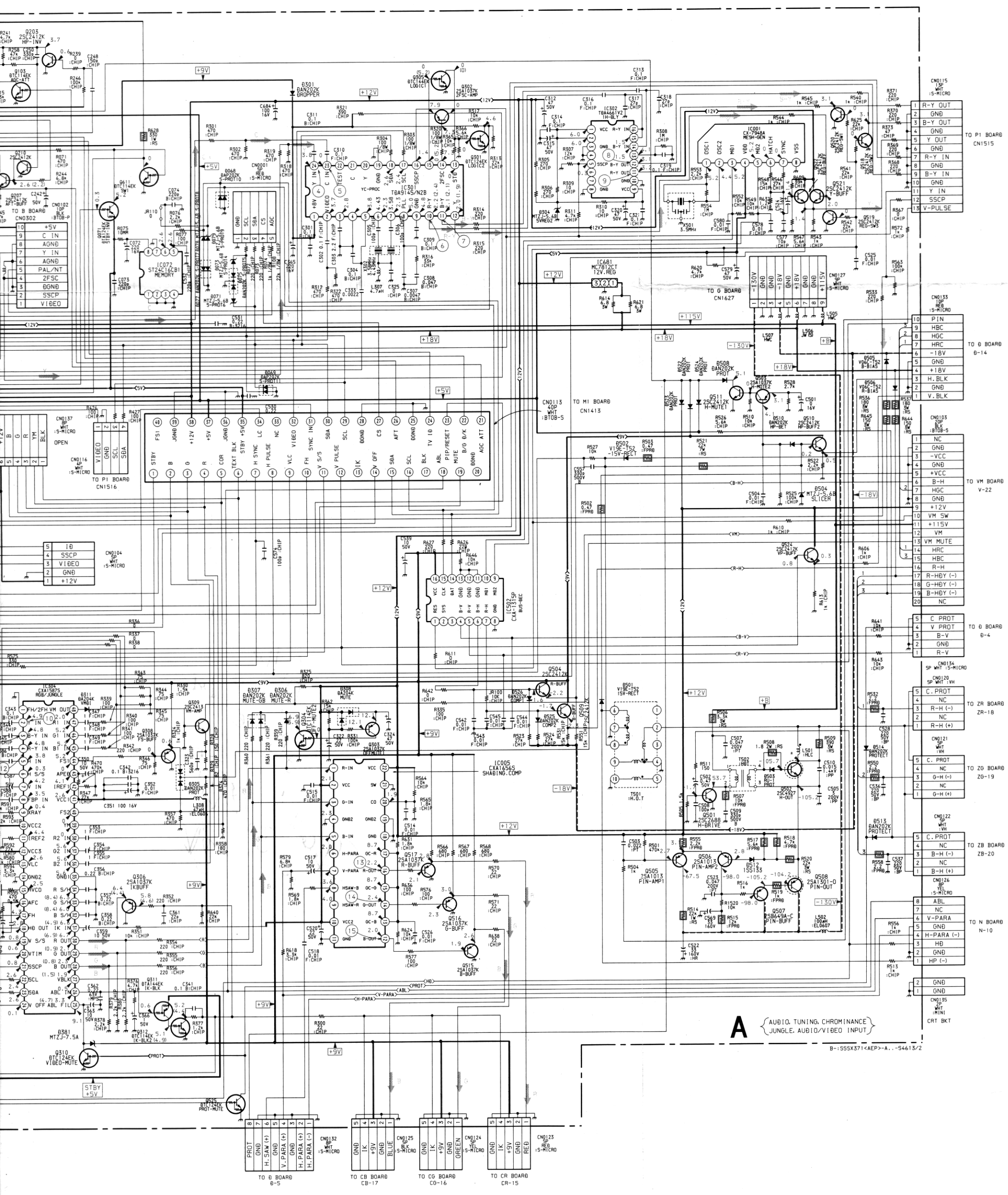


A BOARD IC304 CXA1587S



WAVEFORMS A BOARD

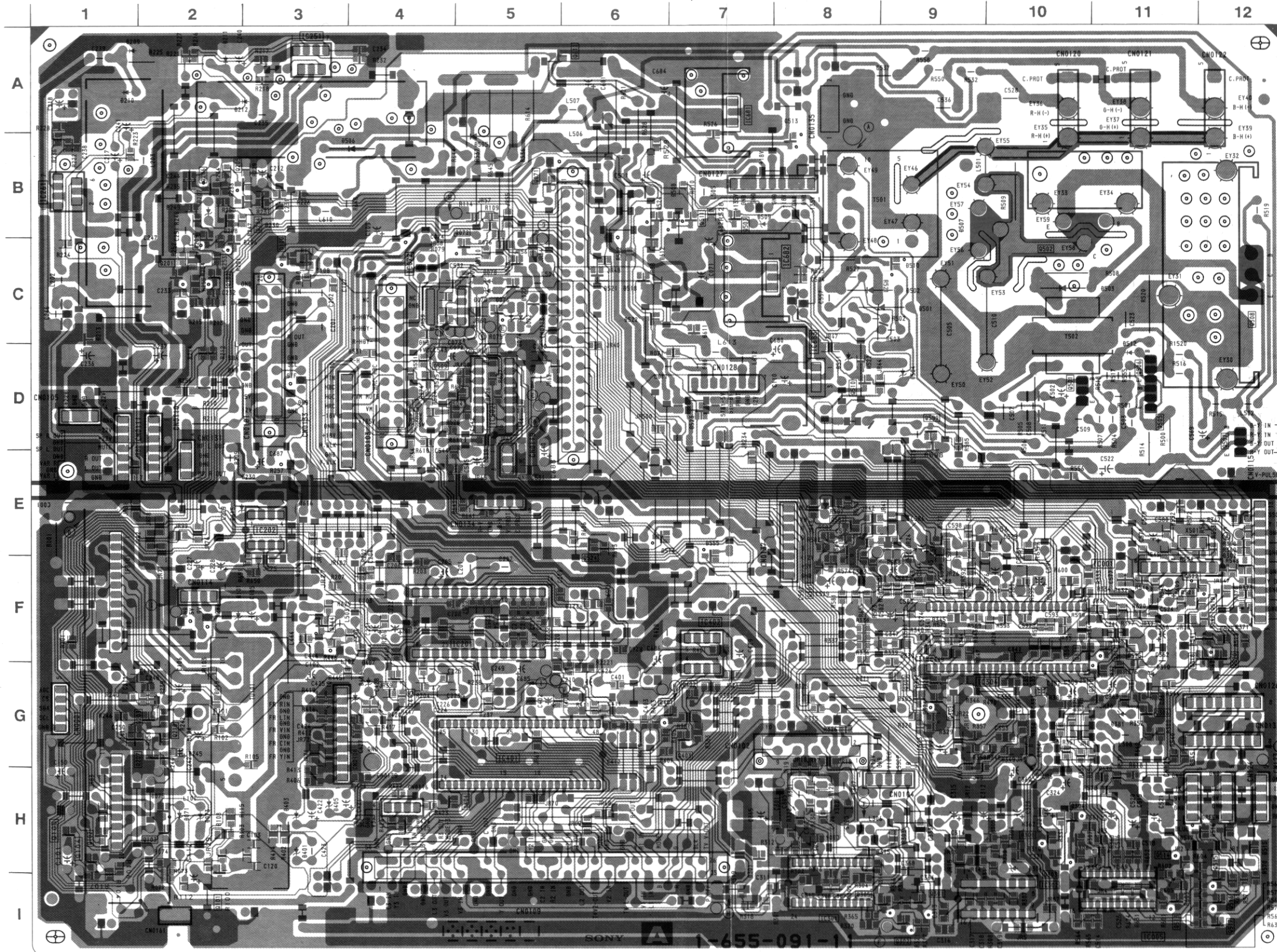




A {AUDIO, TUNING, CHROMINANCE
JUNGLE, AUDIO/VIDEO INPUT}

B--SSX371<AEP>--A...-54613/2

— A BOARD —

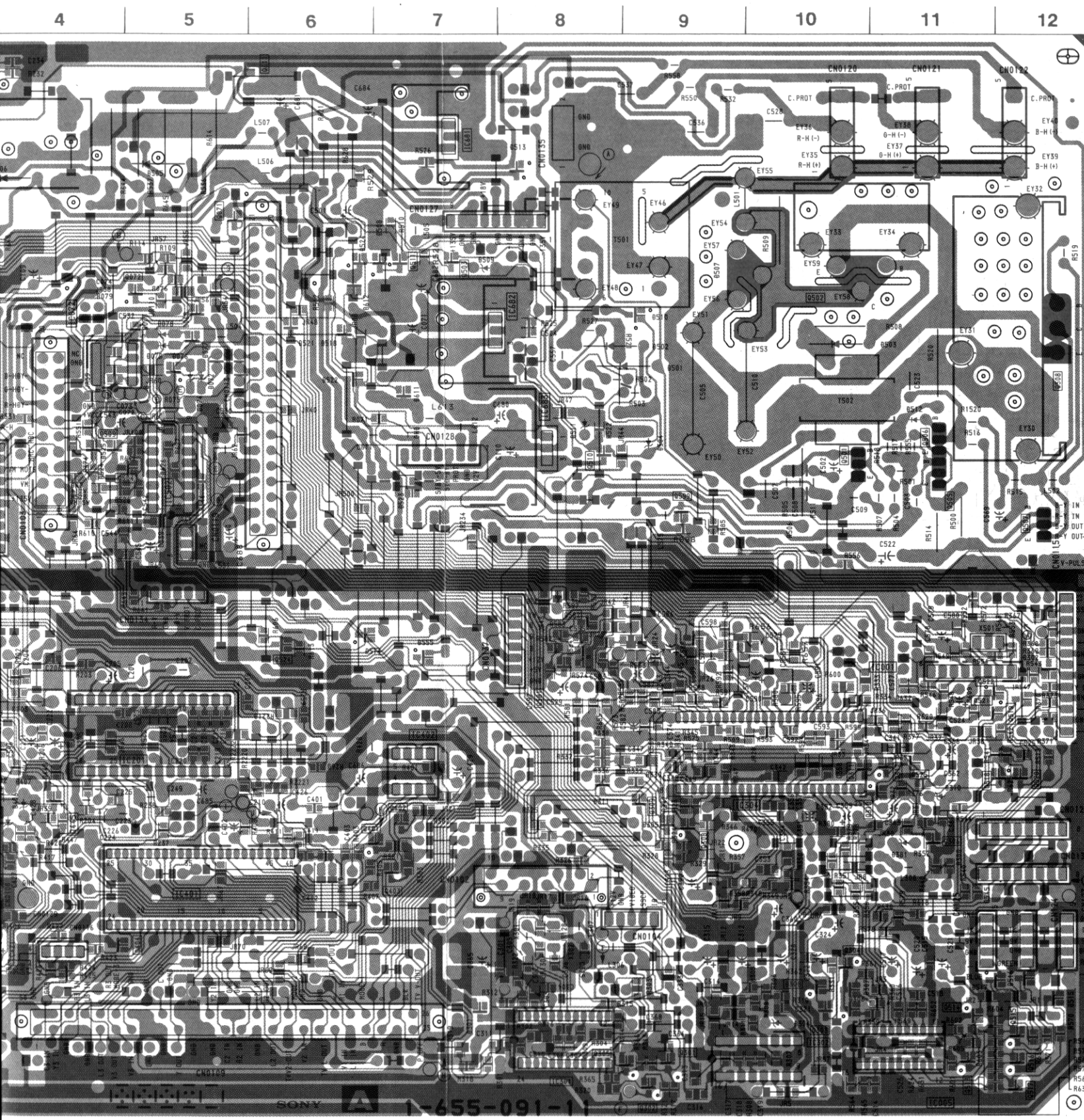


— A BOARD —

IC	
IC001	F-11
IC005	I-11
IC072	C-4
IC201	F-5
IC202	E-3
IC251	A-3
IC261	B-1
IC301	I-8
IC302	I-10
IC304	G-10
IC401	G-5
IC402	F-7
IC502	D-5
IC681	A-7
IC682	C-8
IC683	D-8



TRANSISTOR	
Q071	B-5
Q101	I-2
Q102	H-1
Q103	H-2
Q104	H-1
Q105	H-1
Q201	C-2
Q202	C-2
Q203	G-2
Q204	B-3
Q205	B-2
Q206	B-2
Q207	G-2
Q209	C-2
Q210	G-2
Q301	I-9
Q302	I-9
Q303	H-10
Q304	H-10
Q305	I-9
Q306	G-11
Q308	G-9
Q309	G-9
Q310	G-11

- : Pattern from the side which enables s
- : Pattern of the rear side.



— A BOARD —

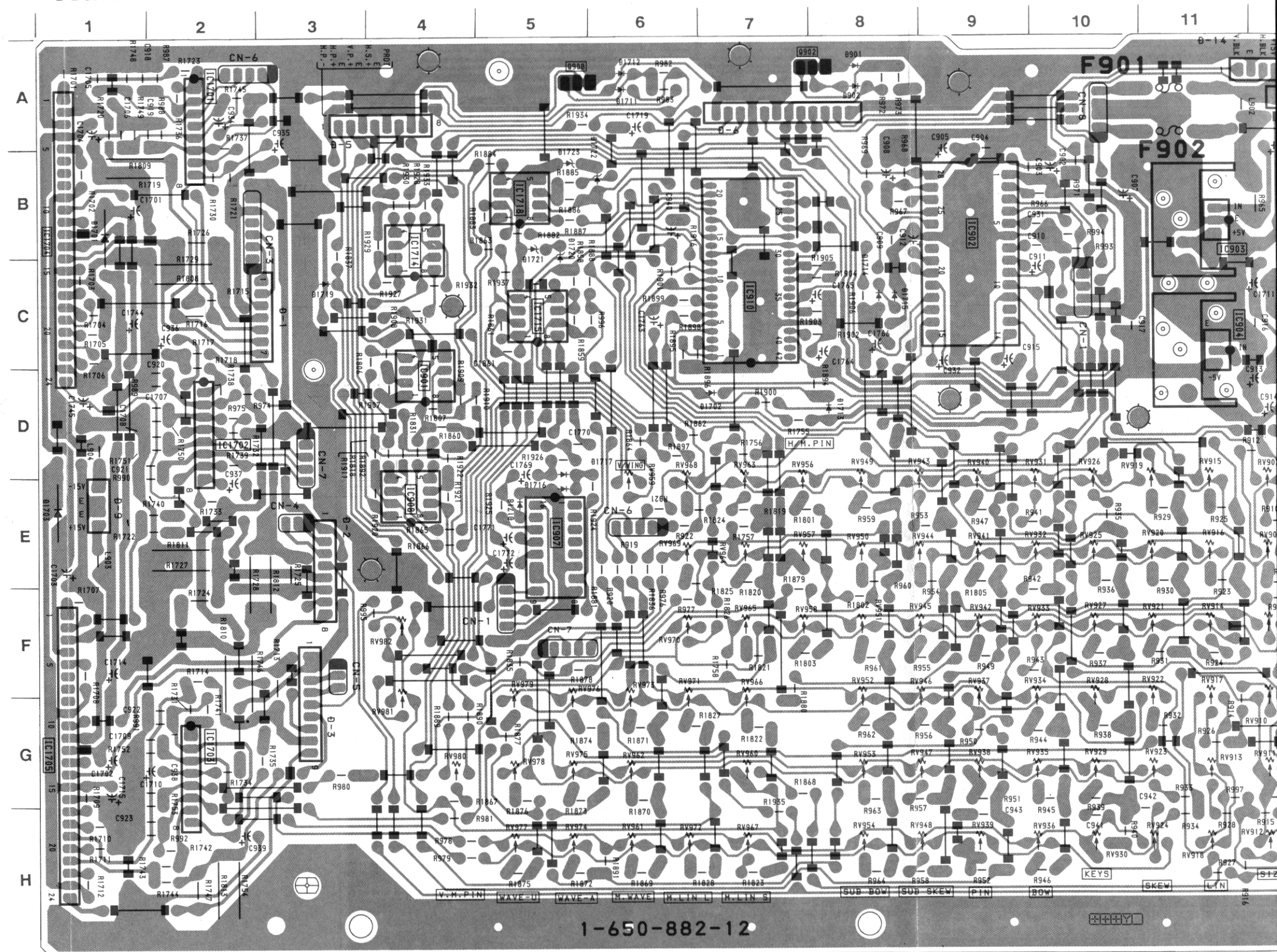
[illegible]

-  : Pattern from the side which enables seeing.
-  : Pattern of the rear side.

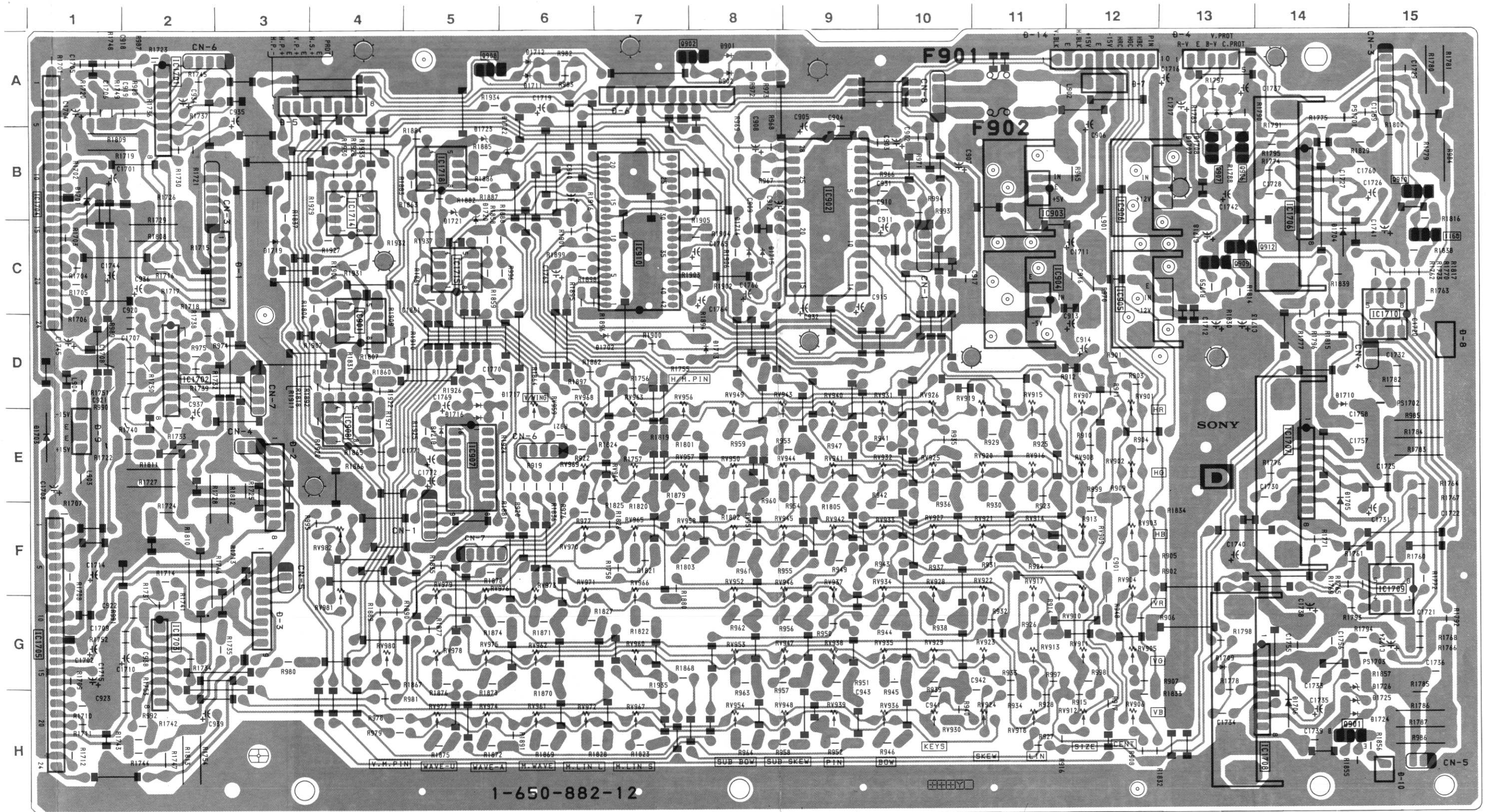
— D BOARD —

IC		D1712	A-6	RV934	F-10
IC901	D-4	D1713	D-8	RV935	G-10
IC902	B-9	D1714	C-8	RV936	H-10
IC903	B-11	D1715	C-8	RV937	F-9
IC904	C-11	D1716	E-5	RV938	G-9
IC905	C-12	D1717	D-5	RV939	H-9
IC906	B-12	D1718	E-5	RV940	D-9
IC907	E-5	D1720	B-5	RV941	E-9
IC908	E-4	D1721	B-5	RV942	F-9
IC910	C-7	D1722	B-6	RV943	D-9
IC1701	A-2	D1723	B-5	RV944	E-9
IC1702	D-2	VARIABLE RESISTOR		RV945	F-9
IC1703	G-2			RV946	F-9
IC1704	B-2	RV947	G-9	RV948	H-9
IC1705	G-1	RV901	D-12	RV949	D-8
IC1706	C-14	RV902	E-12	RV950	E-8
IC1707	E-14	RV903	F-12	RV951	F-8
IC1708	H-14	RV904	F-12	RV952	F-8
IC1709	F-15	RV905	G-12	RV953	G-8
IC1710	D-15	RV906	H-12	RV954	H-8
IC1714	B-4	RV907	D-12	RV955	D-7
IC1715	C-5	RV908	E-12	RV956	E-7
IC1718	B-5	RV909	F-12	RV957	F-7
TRANSISTOR		RV910	G-12	RV958	D-6
		RV911	G-12	RV959	H-6
Q902	A-7	RV912	H-12	RV960	G-6
Q906	B-13	RV913	G-11	RV961	D-7
Q907	B-13	RV914	F-11	RV962	E-7
Q908	A-5	RV915	D-11	RV963	F-7
Q909	C-13	RV916	E-11	RV964	F-7
Q910	B-15	RV917	F-12	RV965	H-7
Q911	C-15	RV918	H-11	RV966	D-6
Q912	C-14	RV919	D-11	RV967	E-6
DIODE		RV920	E-11	RV968	F-6
		RV921	F-11	RV969	H-6
D901	A-8	RV922	F-11	RV970	F-6
D902	A-8	RV923	G-11	RV971	F-6
D1702	D-7	RV924	H-11	RV972	F-6
D1704	C-14	RV925	E-10	RV973	H-5
D1705	F-14	RV926	D-10	RV974	G-5
D1706	H-14	RV927	F-10	RV975	F-5
D1707	A-13	RV928	F-10	RV976	H-5
D1708	A-13	RV929	G-10	RV977	G-5
D1709	G-13	RV930	H-10	RV978	F-5
D1710	D-14	RV931	D-10	RV979	G-4
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		RV933	F-10	RV981	F-4
				RV982	F-4

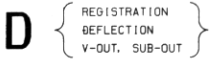
— D BOARD —

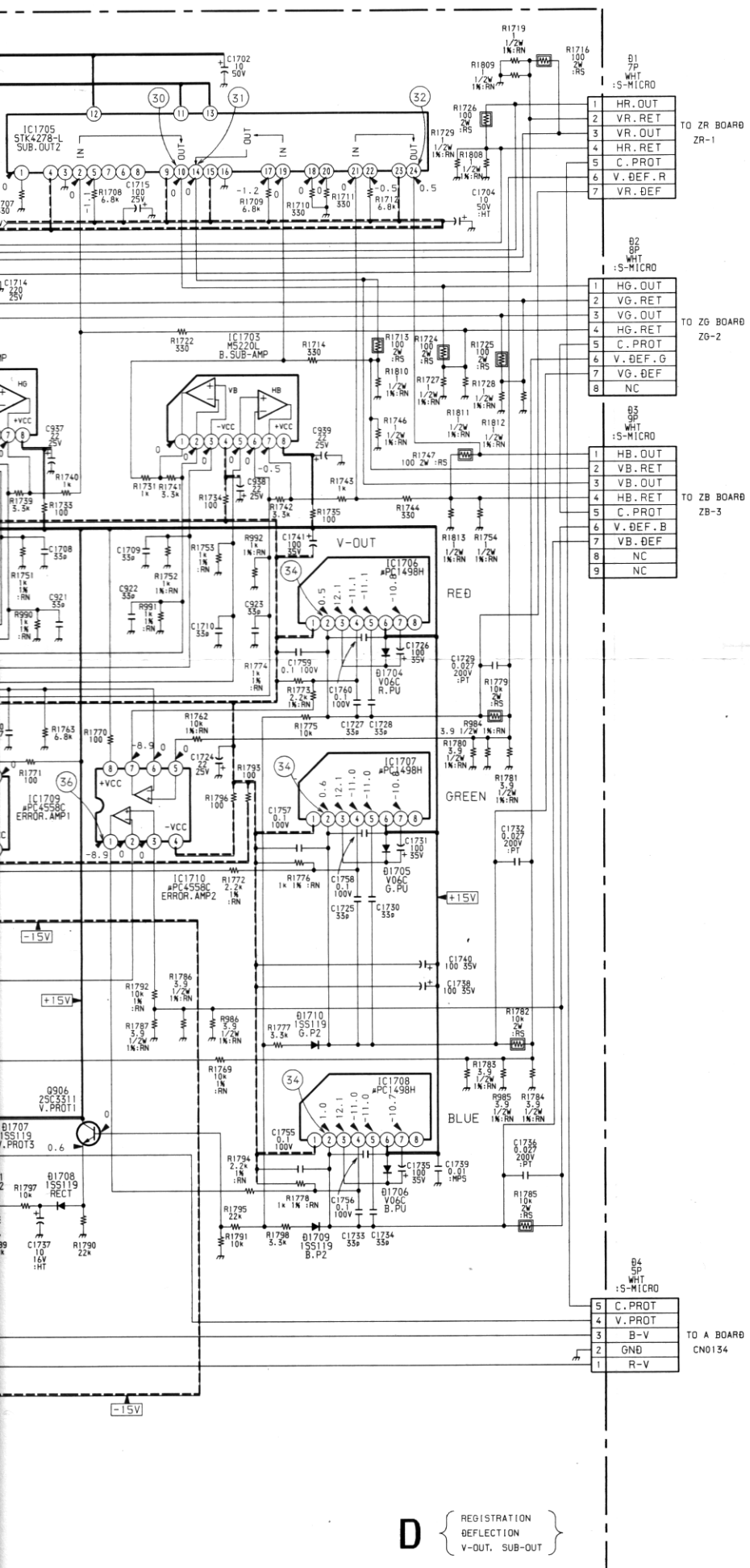


— D BOARD —

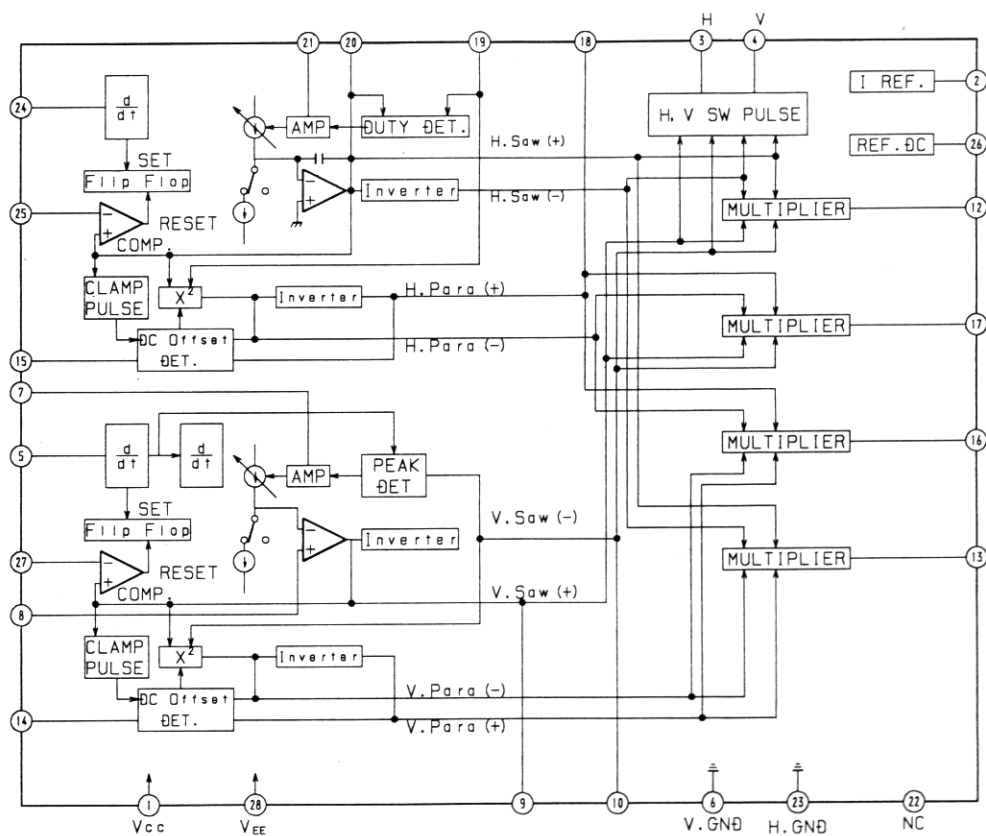




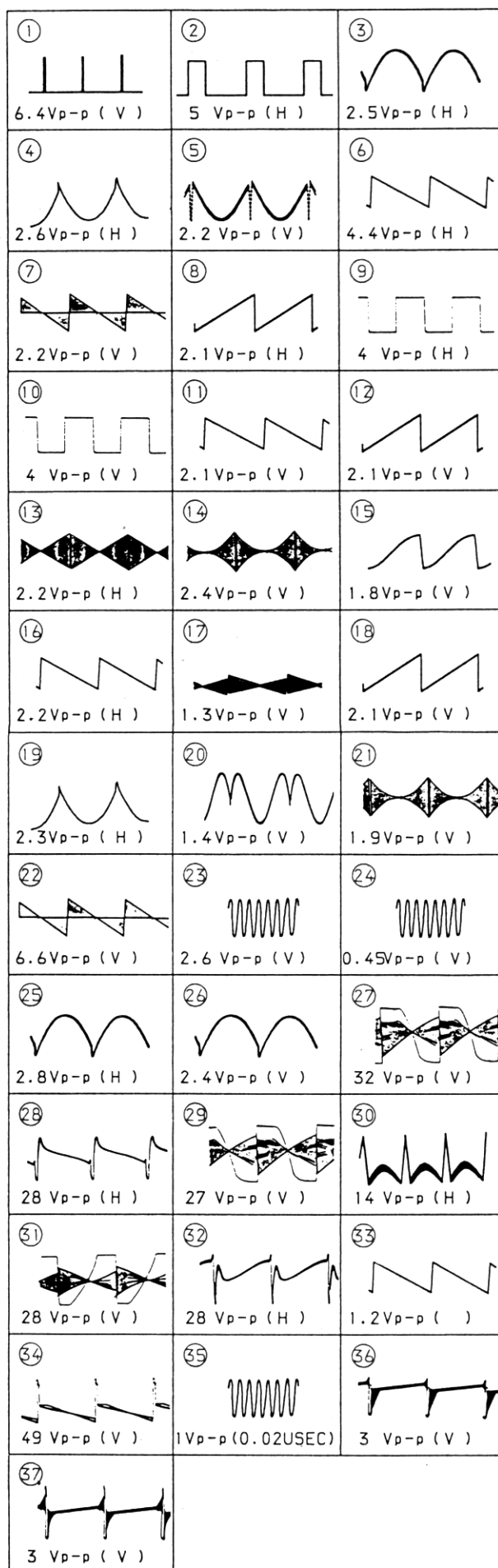


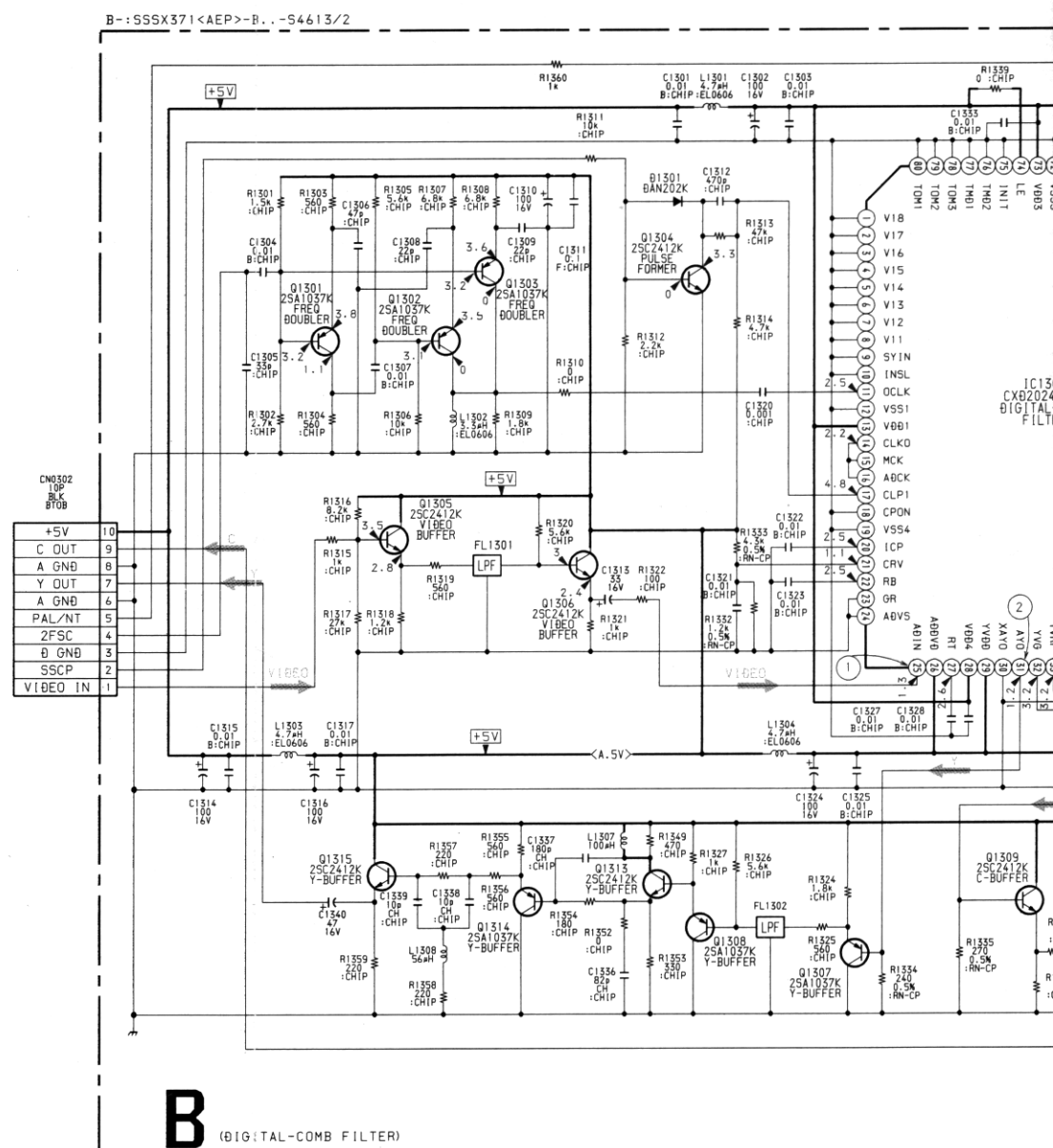
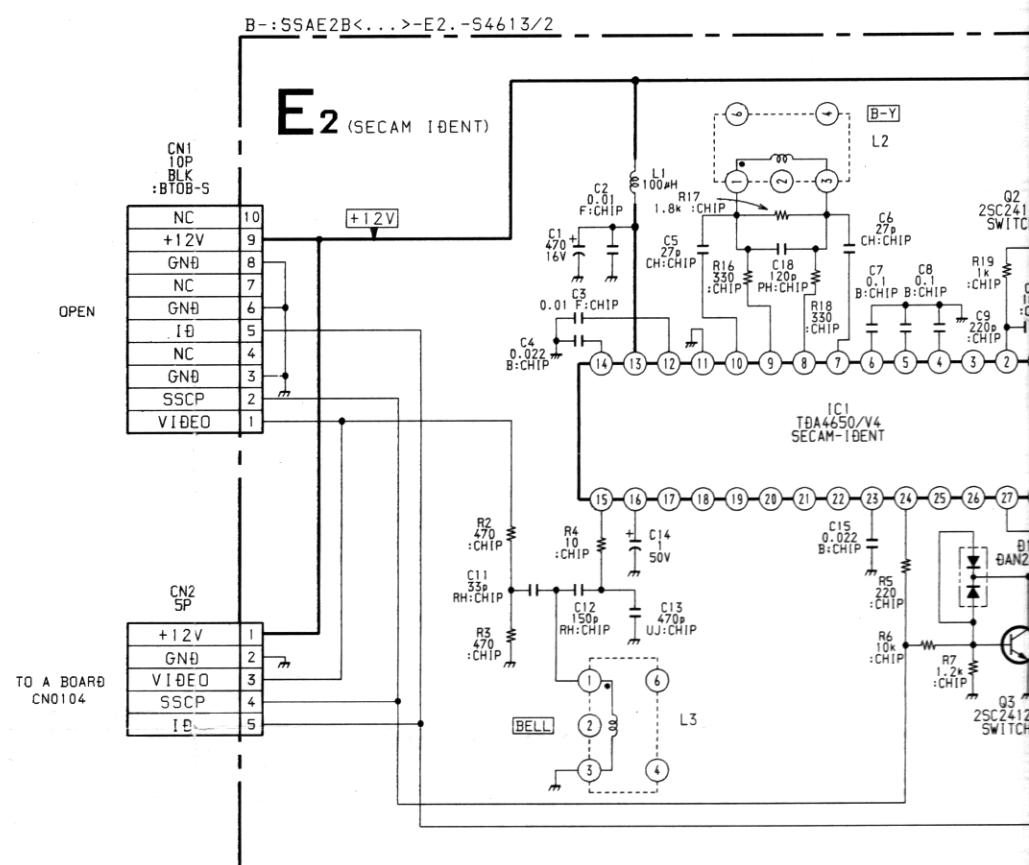


D BOARD IC902 CXA1268P



WAVEFORMS D BOARD





E2

[SECAM IDENT]

B

[DIGITAL-
COMB FILTER]

A1

[NICAM DEMODULATOR
NICAM DECODER]

ZR

[DY IF (RED)]

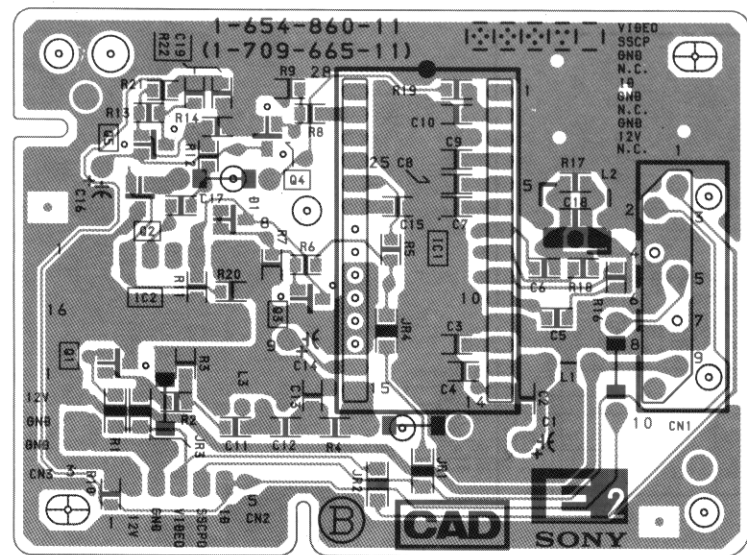
ZG

[DY IF (GREEN)]

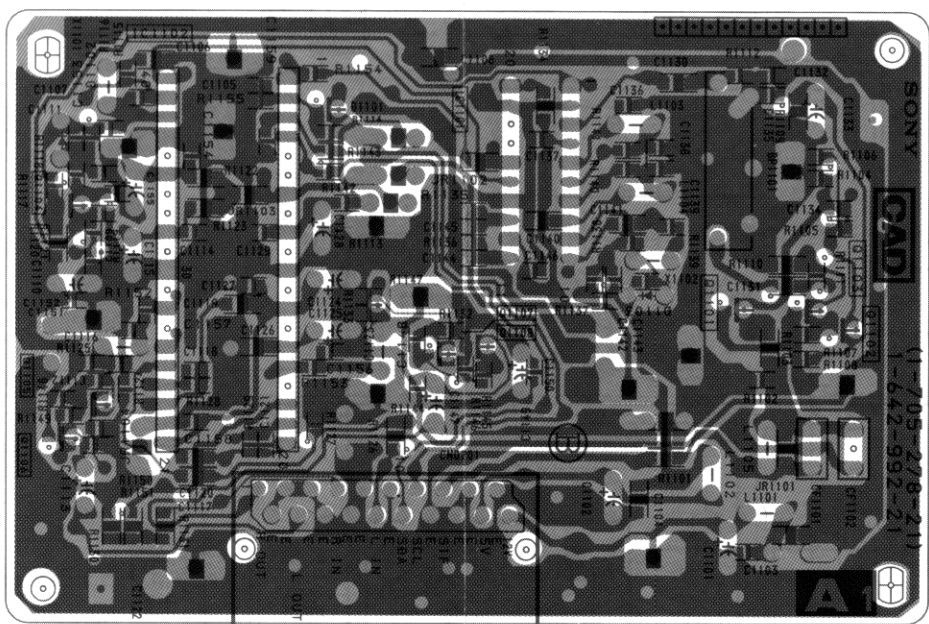
ZB

[DY IF (BLUE)]

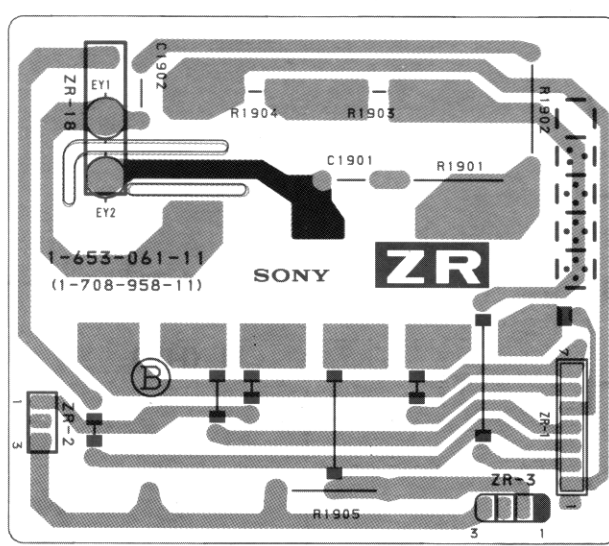
— E2 BOARD —



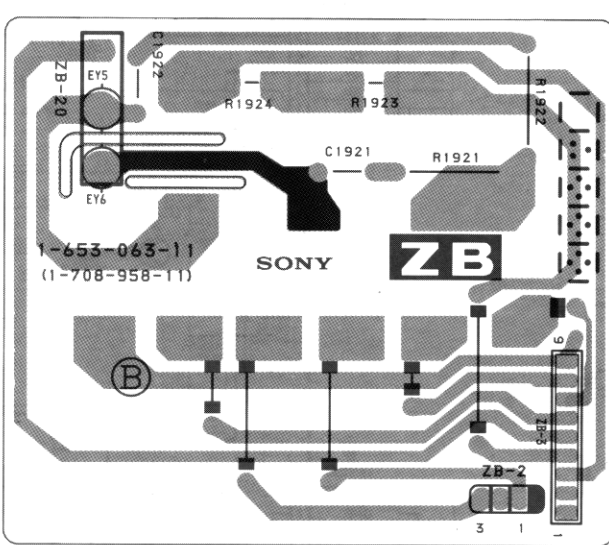
— A1 BOARD —



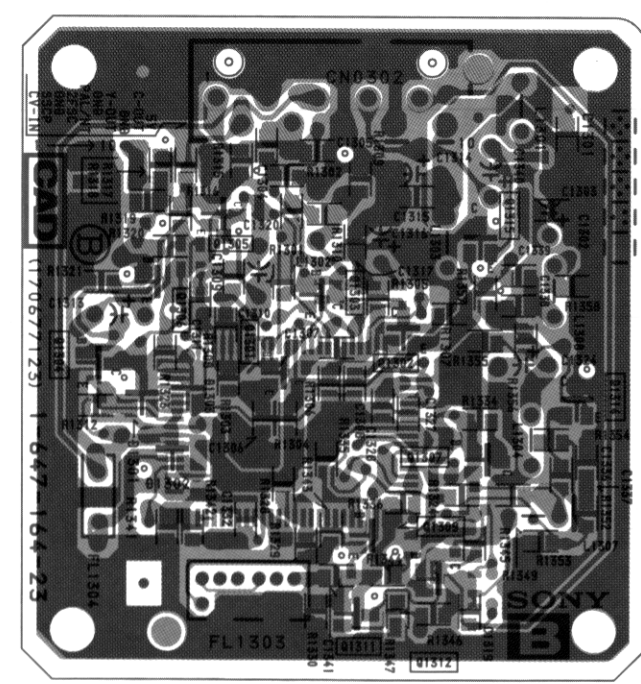
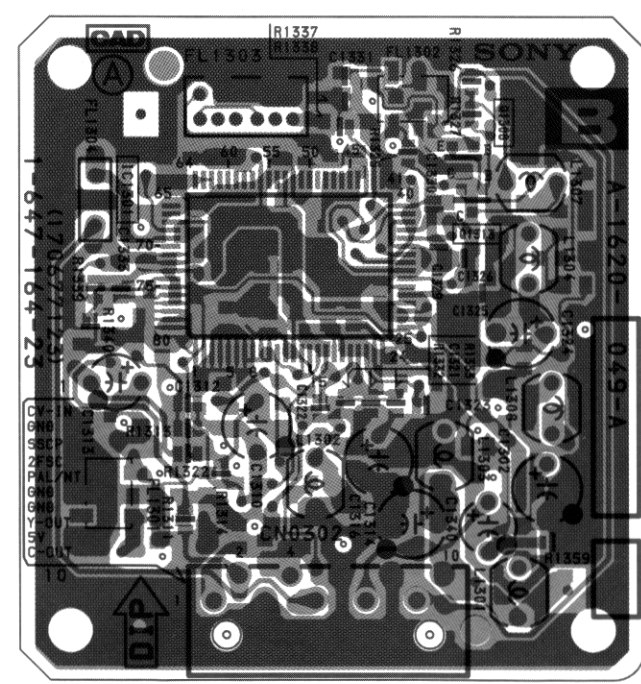
— ZR BOARD —



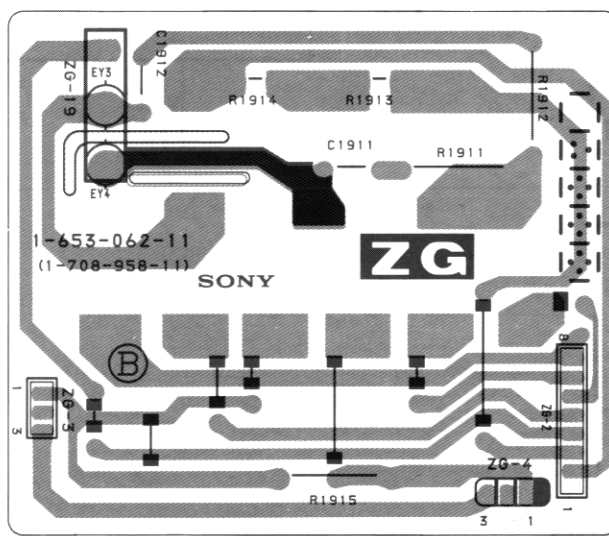
— ZB BOARD —



— B BOARD —

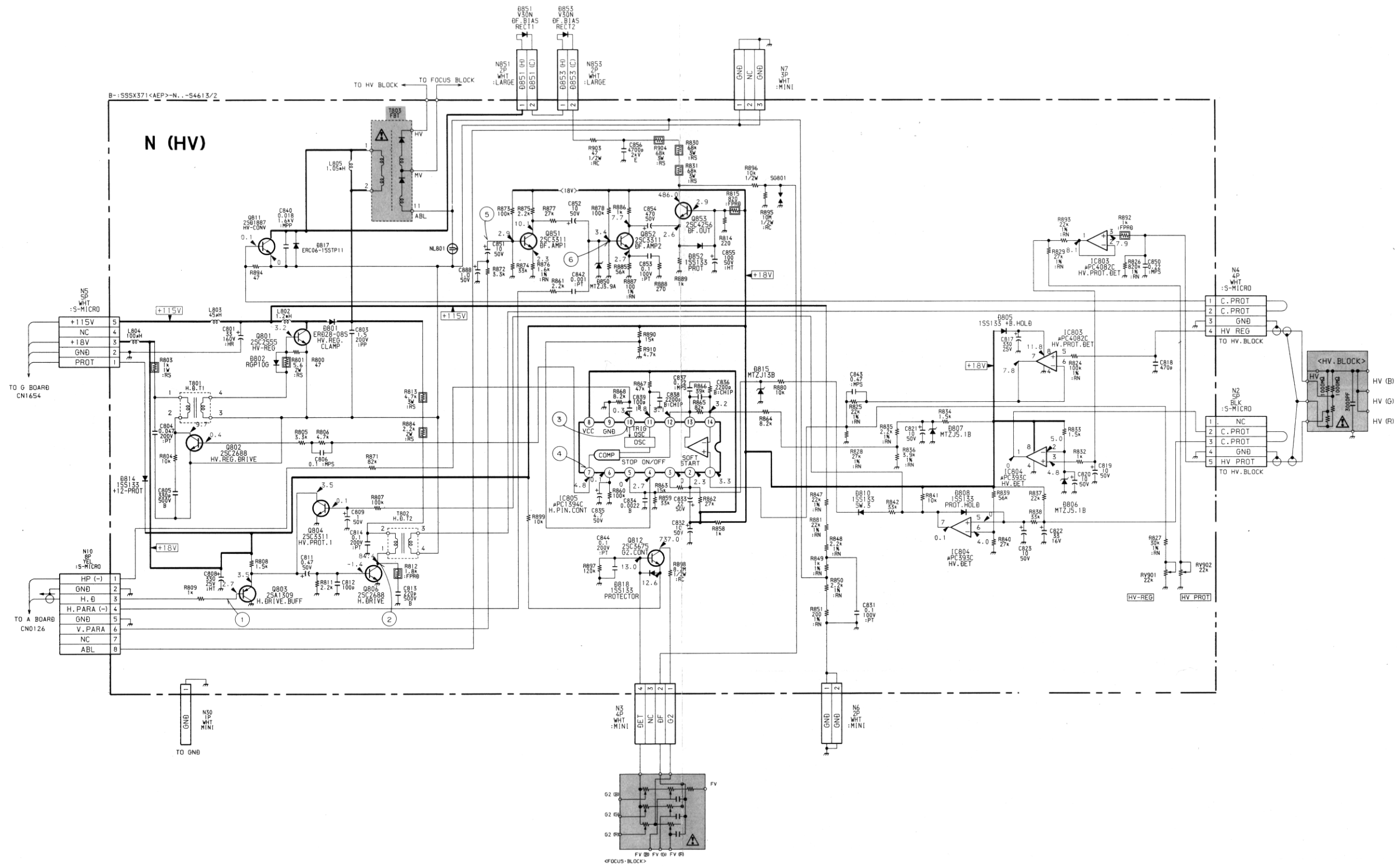


— ZG BOARD —

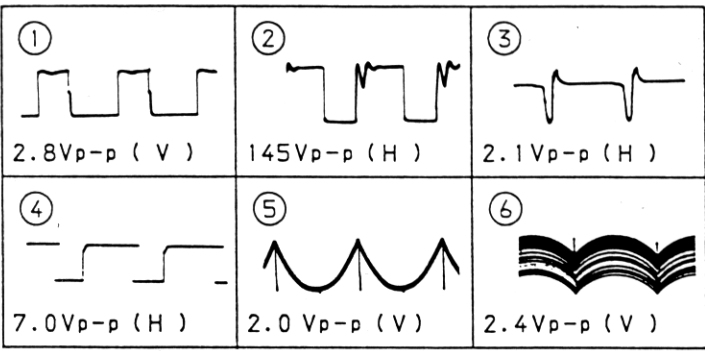


• : Pattern from the side which enables seeing.
• : Pattern of the rear side.

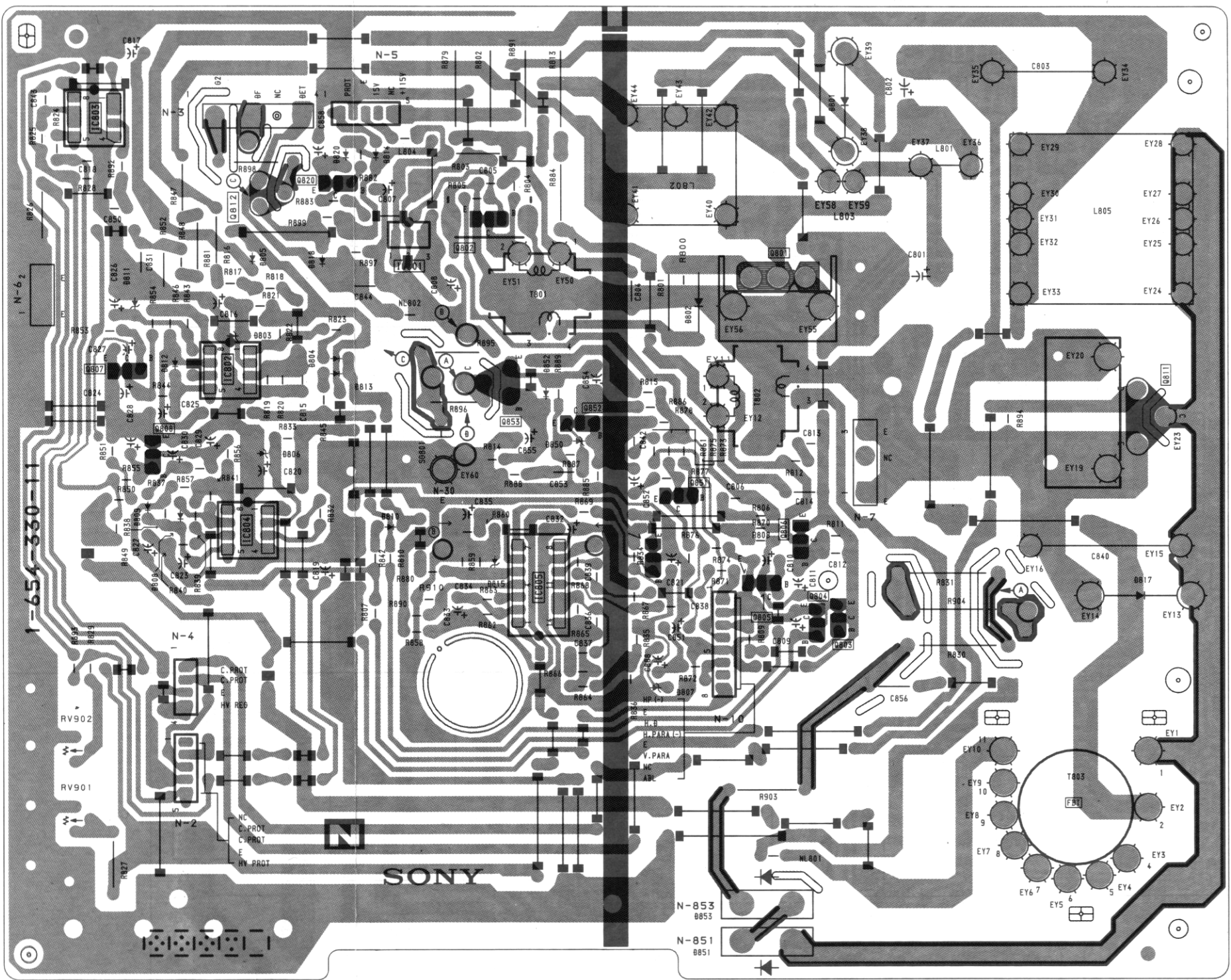
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WAVEFORMS N BOARD



— N BOARD —



G

[POWER SUPPLY]

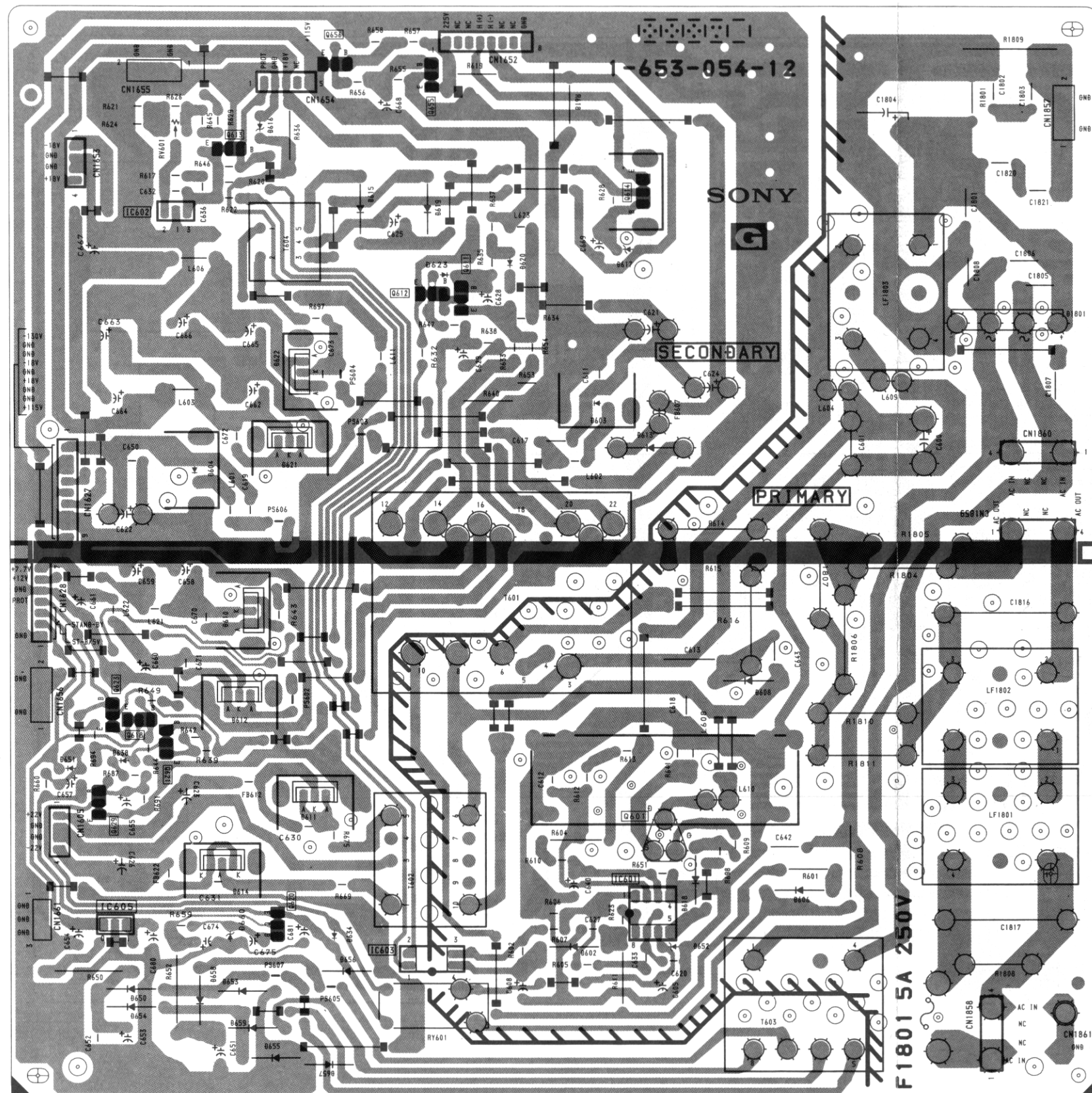
V_M

[VM AMP]

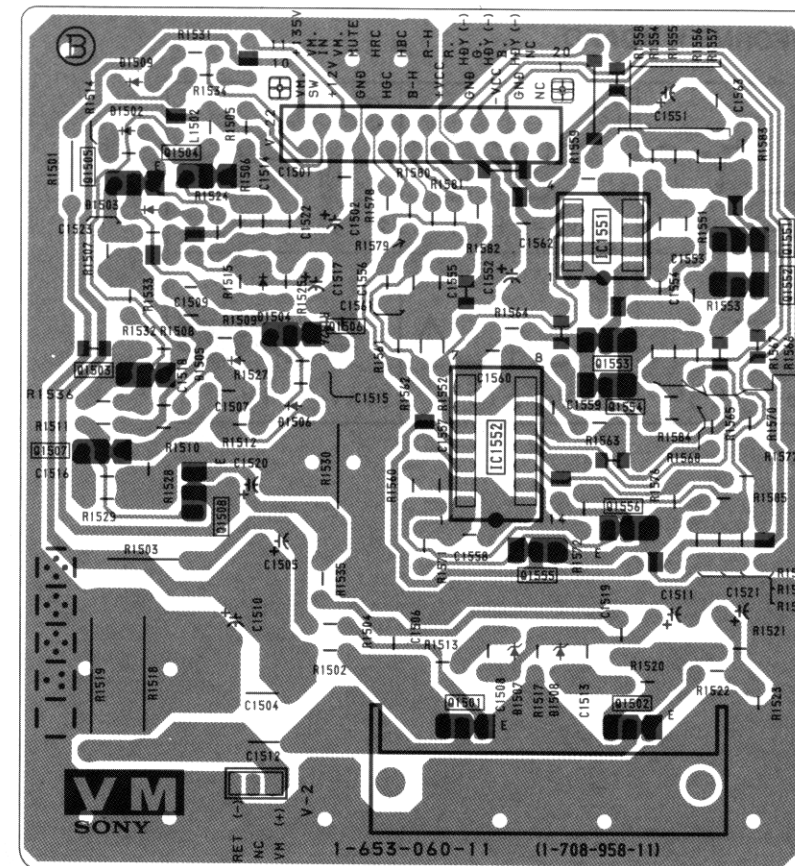
D_s

[H/V SIN, WAVE GEN]

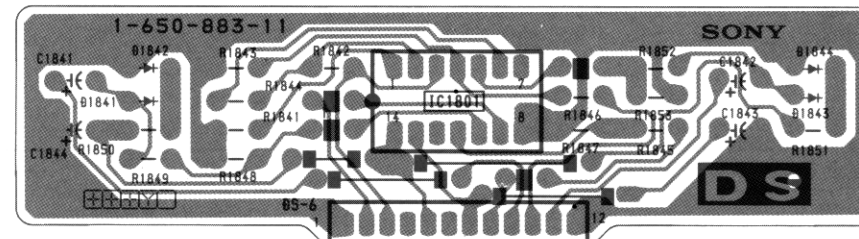
— G BOARD —

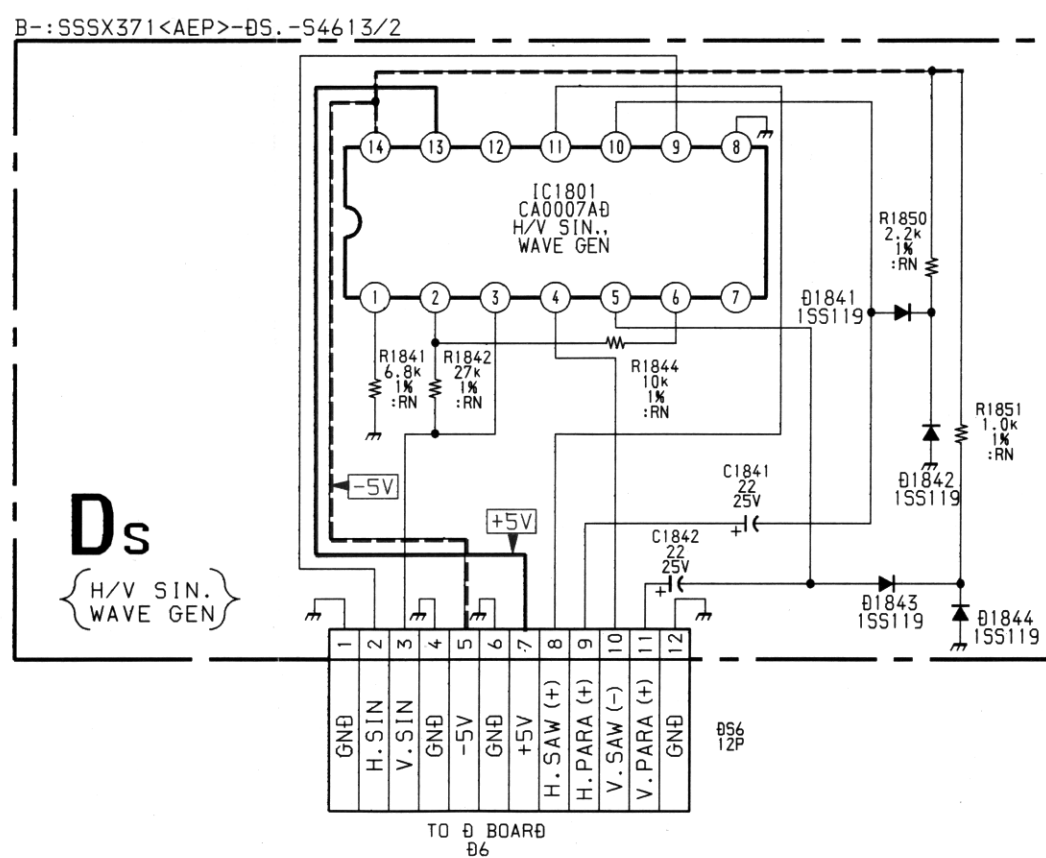
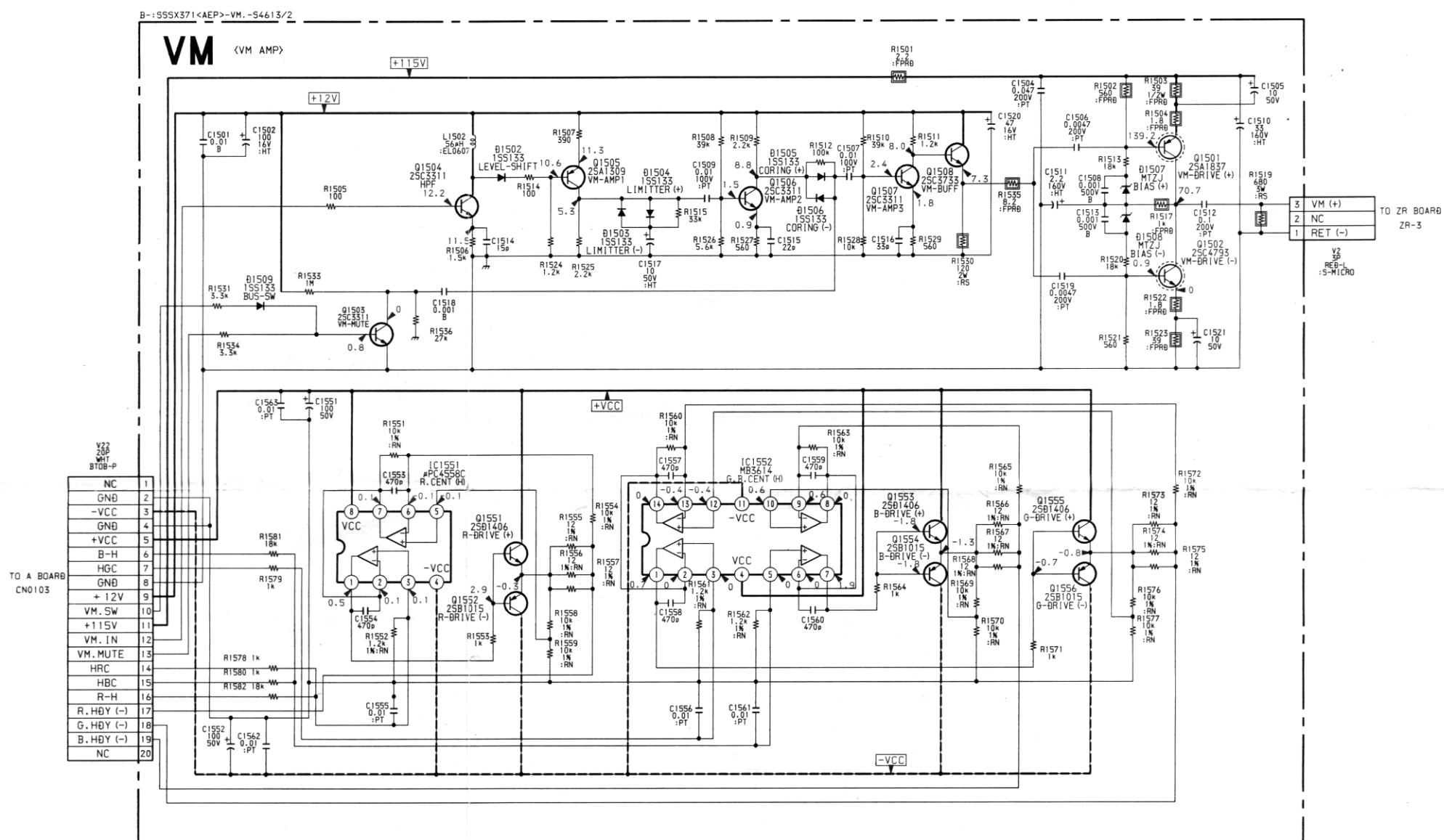


— VM BOARD —

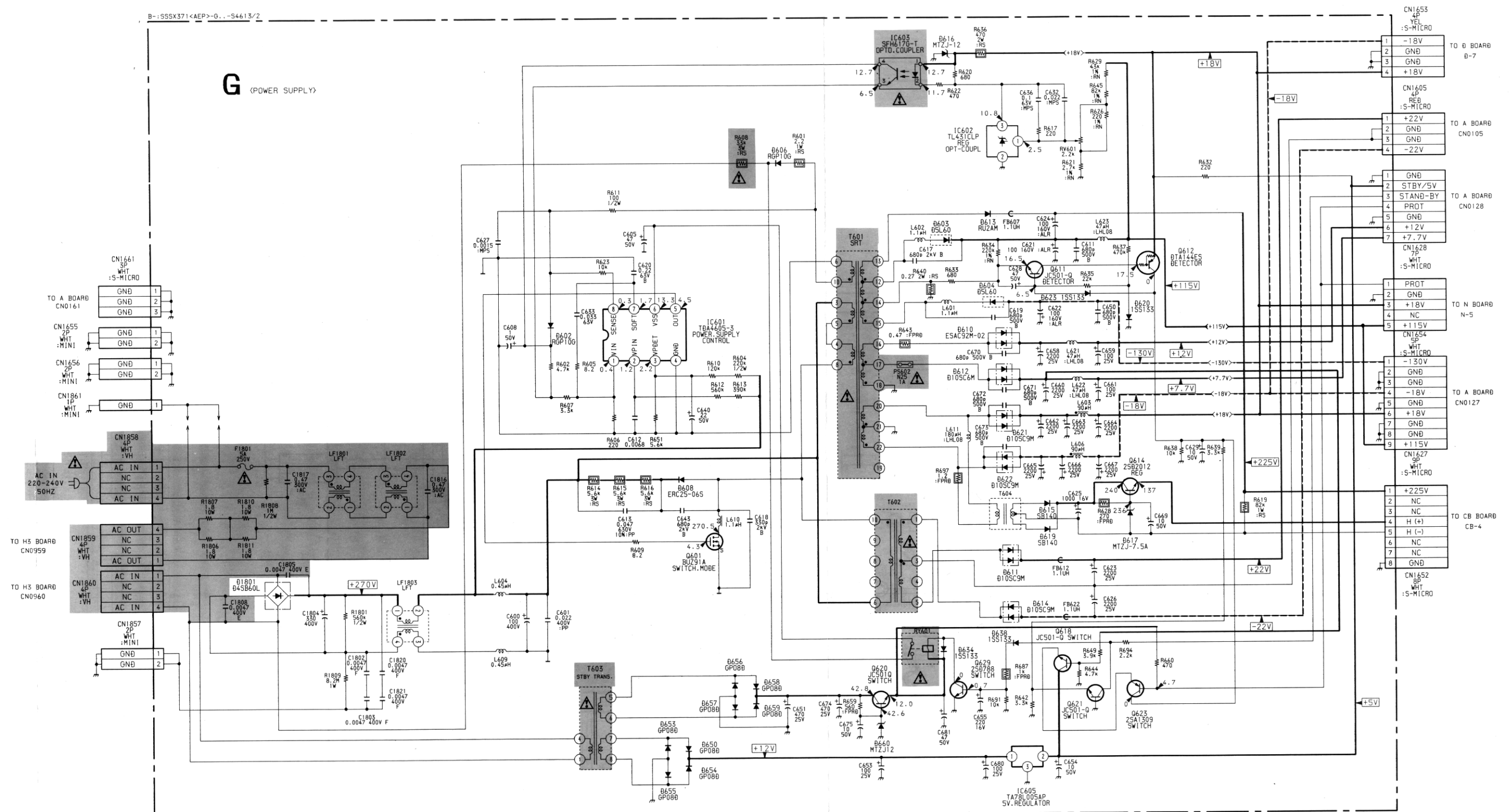


— DS BOARD —

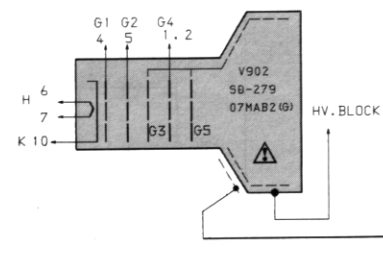
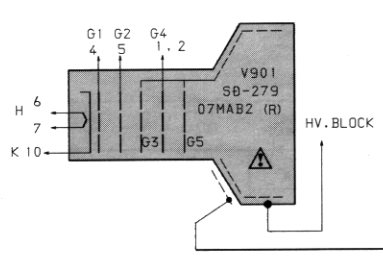
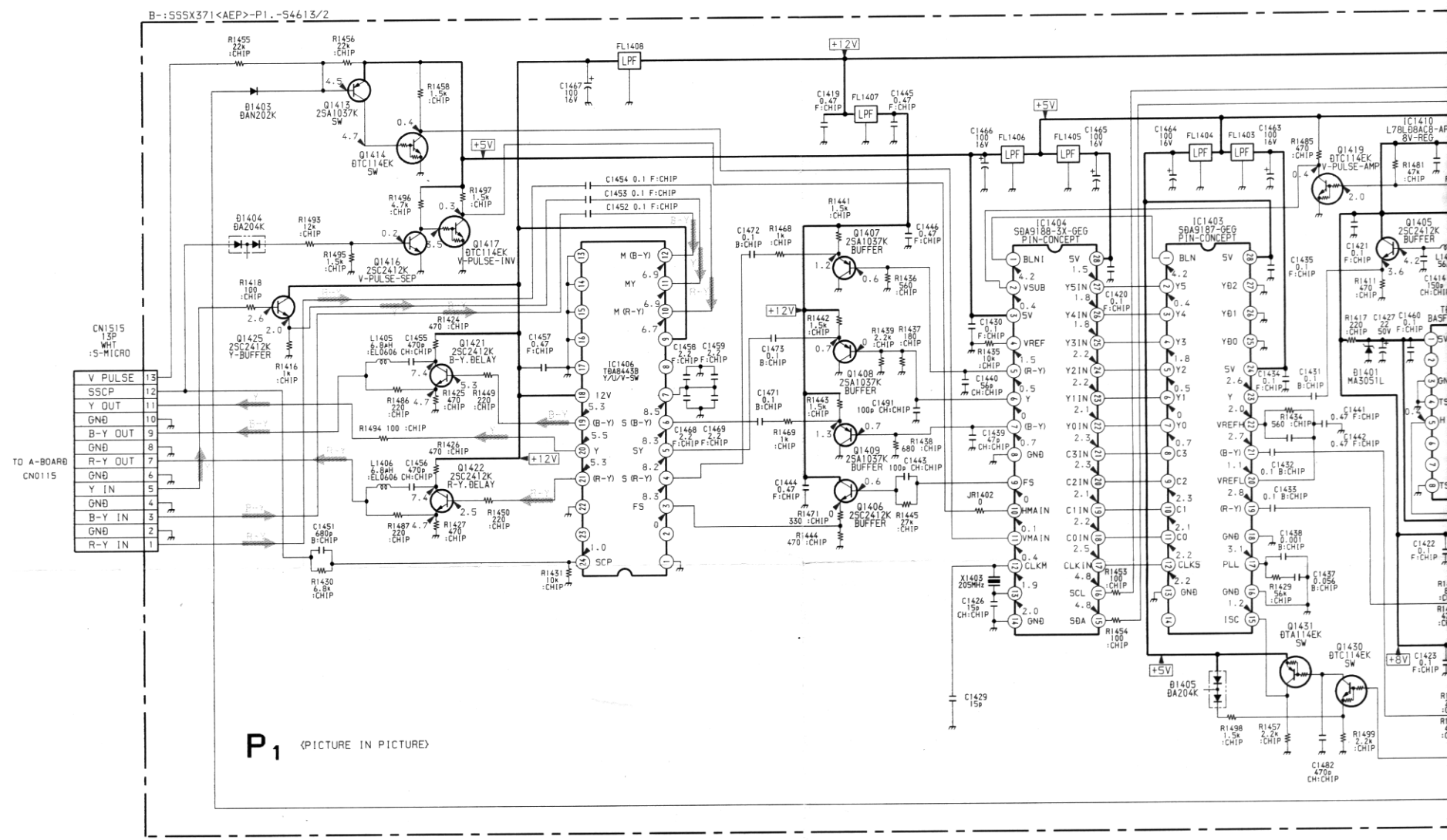




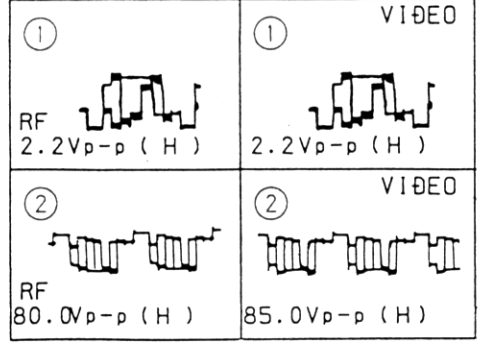
G (POWER SUPPLY)



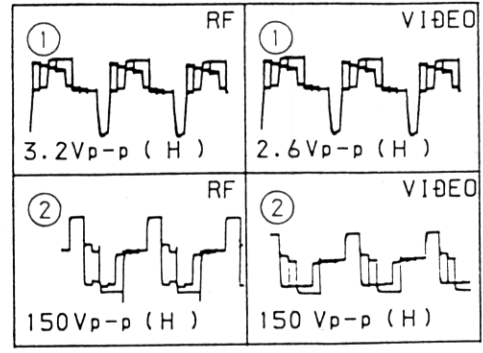
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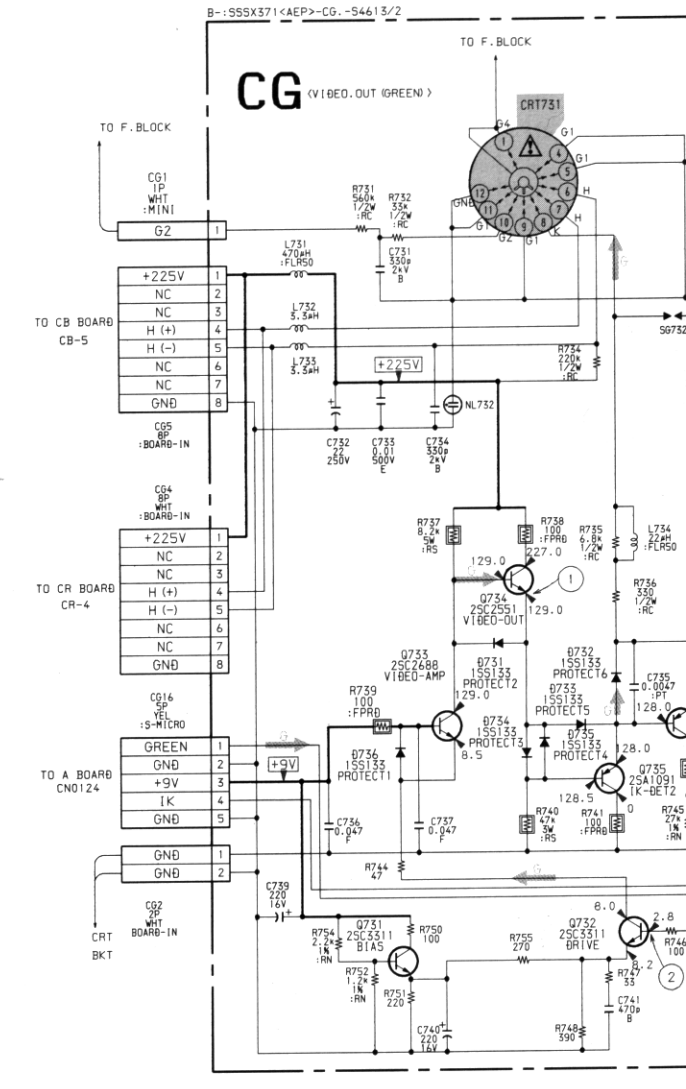
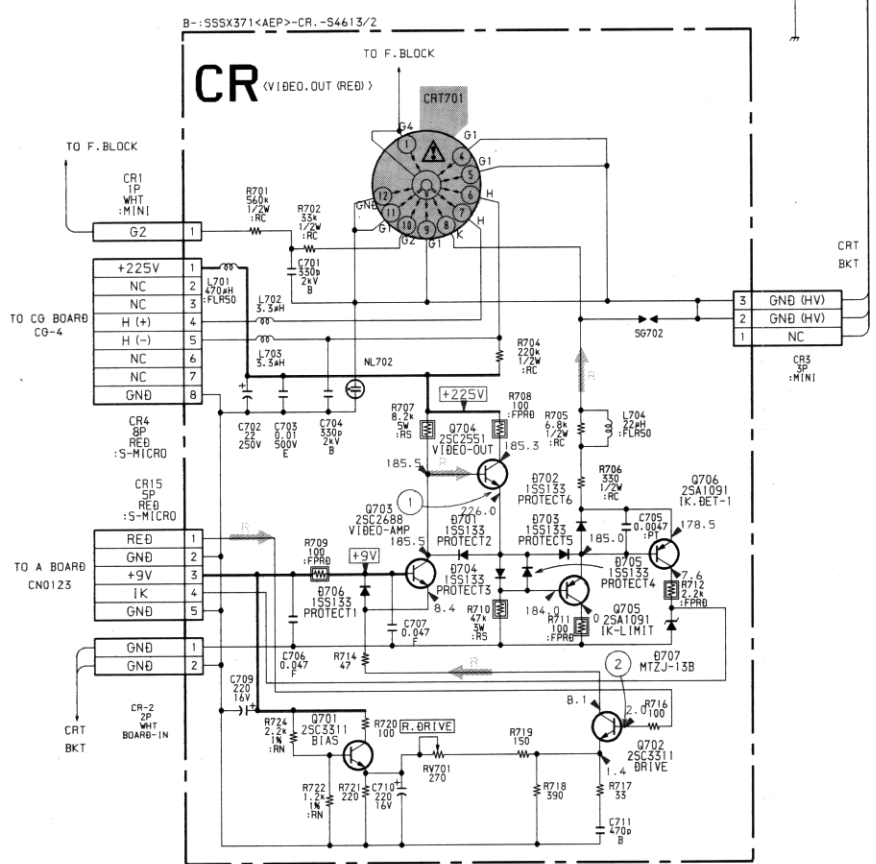
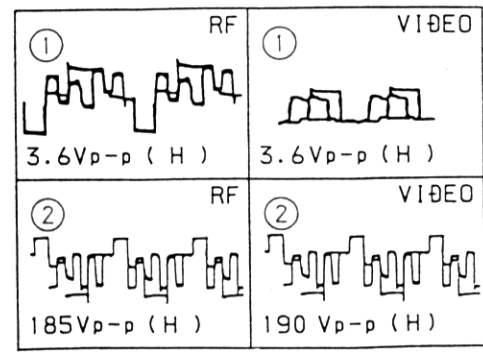
CR BOARD WAVEFORMS

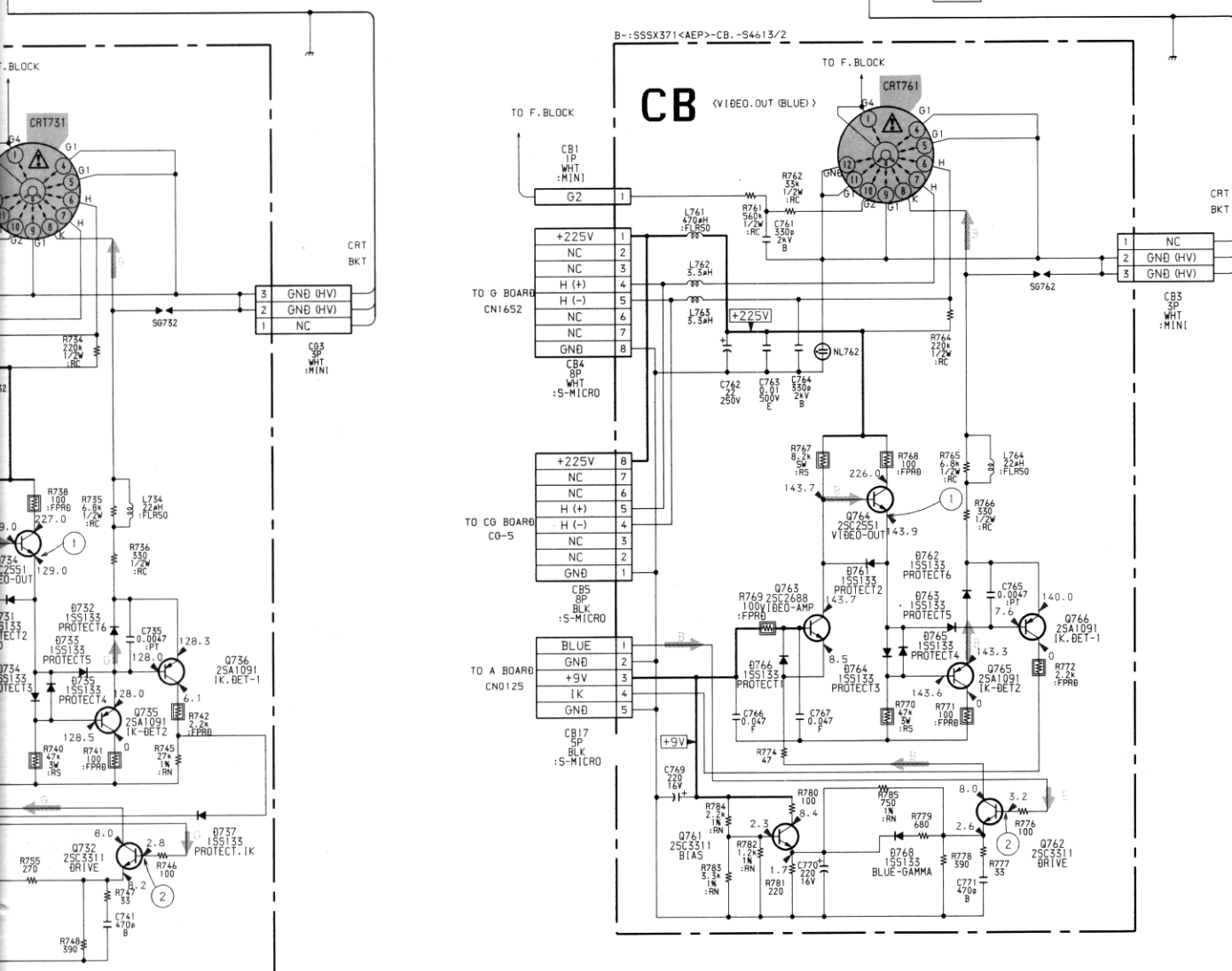
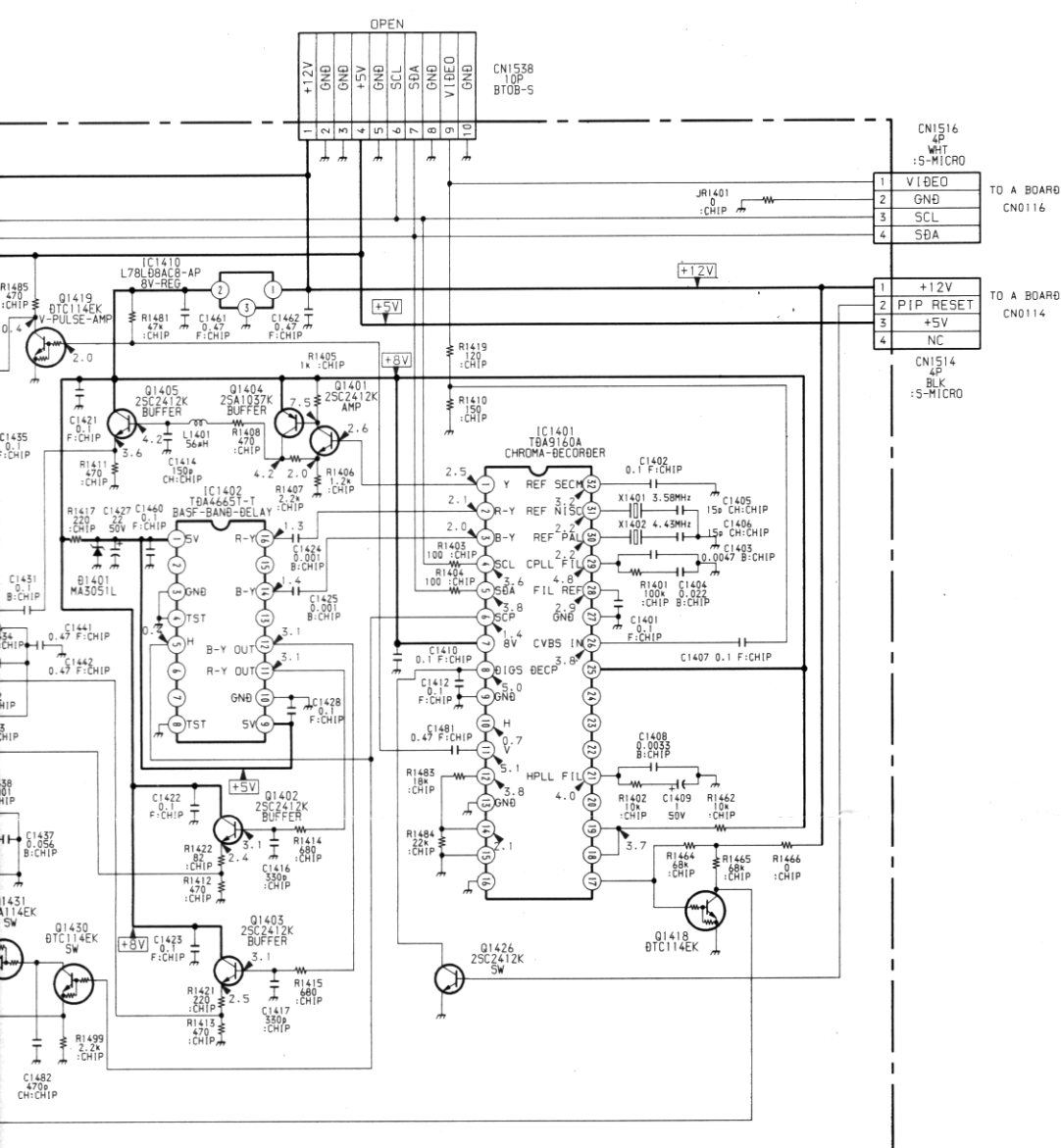


CG BOARD WAVEFORMS

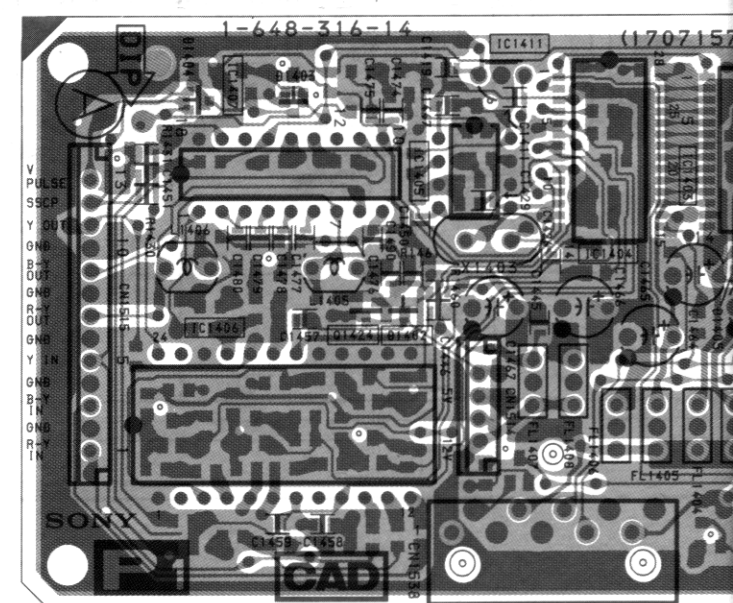
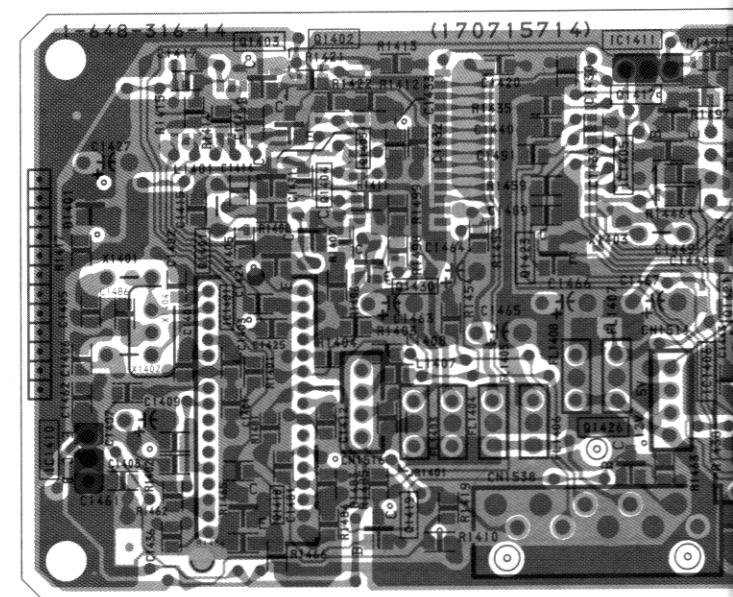


CB BOARD WAVEFORMS

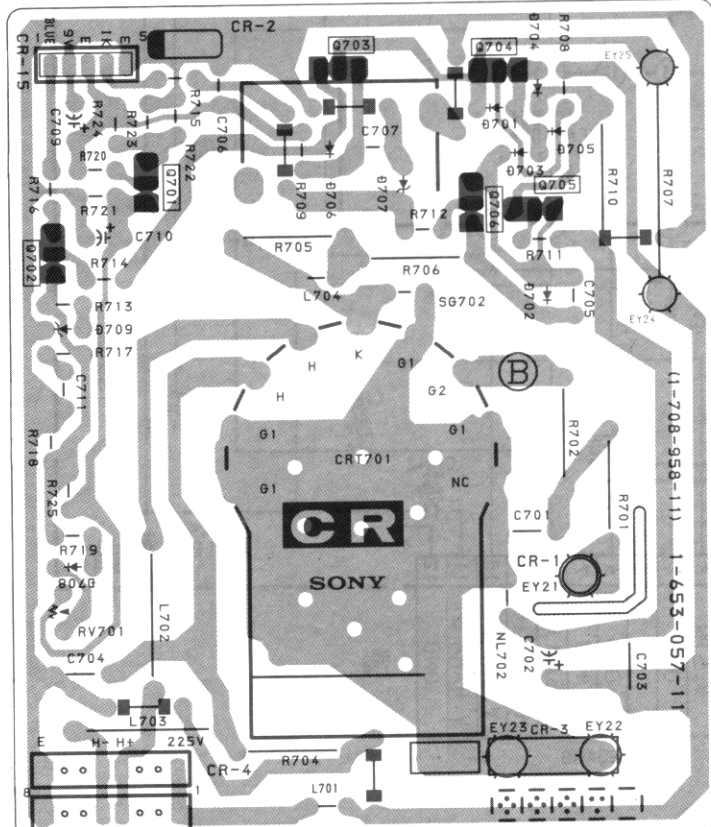




— P1 BOARD —



— CR BOARD —



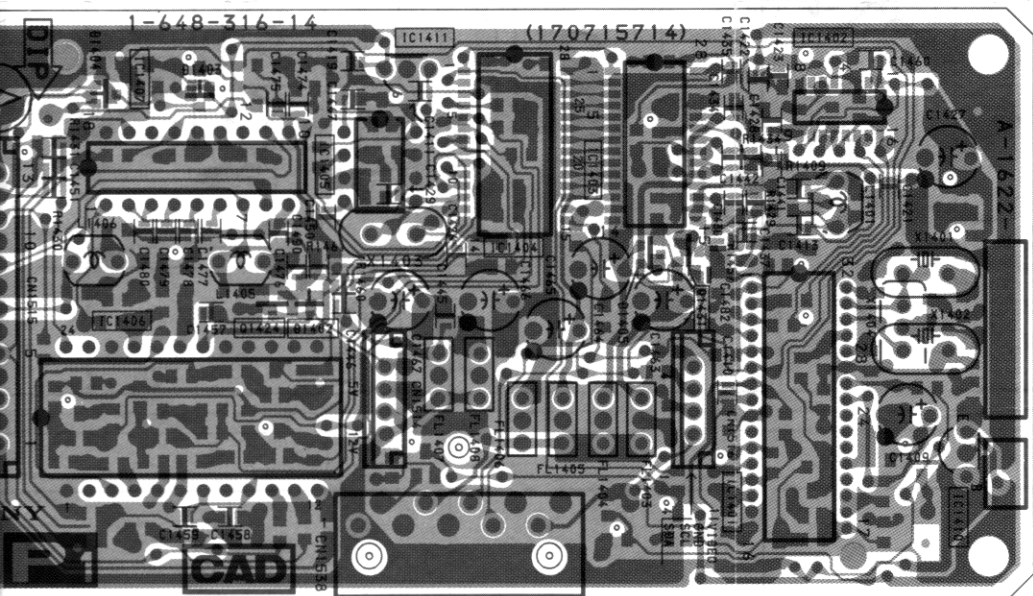
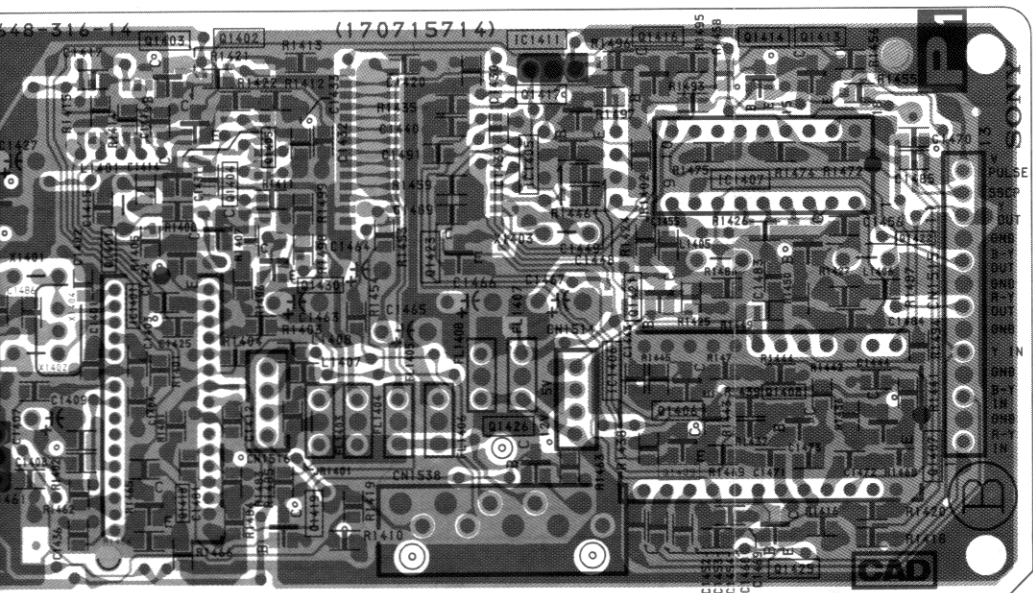
[VIDEO.OUT (RED)]


[VIDEO.OUT (GREEN)]

[VIDEO.OUT (BLUE)]

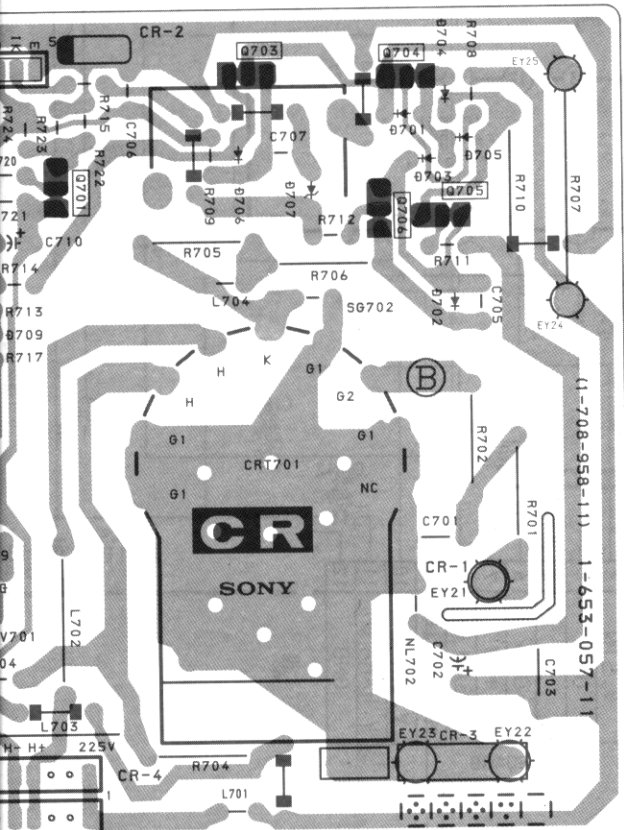
[VIDEO.OUT (BLUE)]

BOARD —

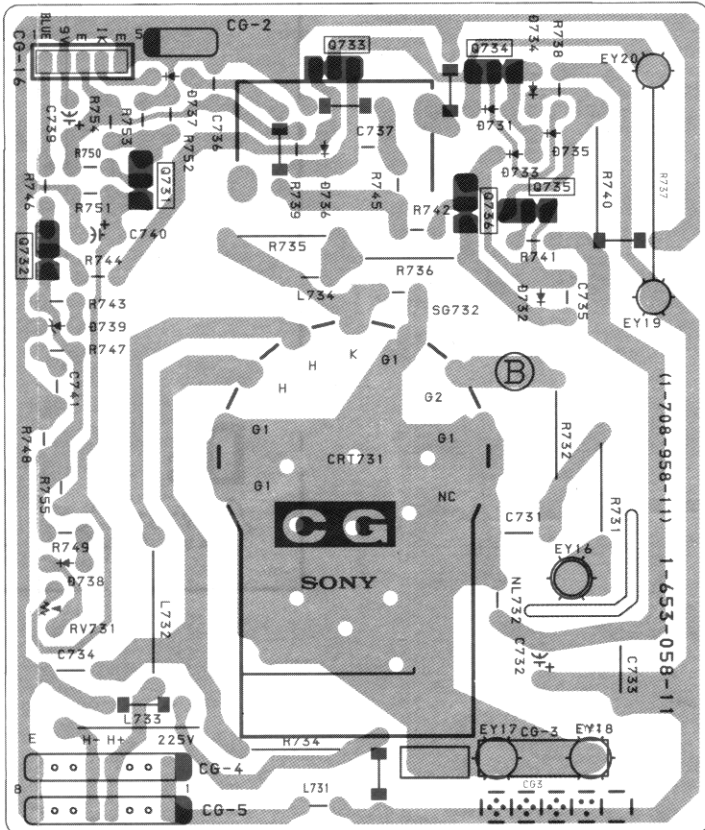


- : Pattern from the side which enables seeing.
-  : Pattern of the rear side.

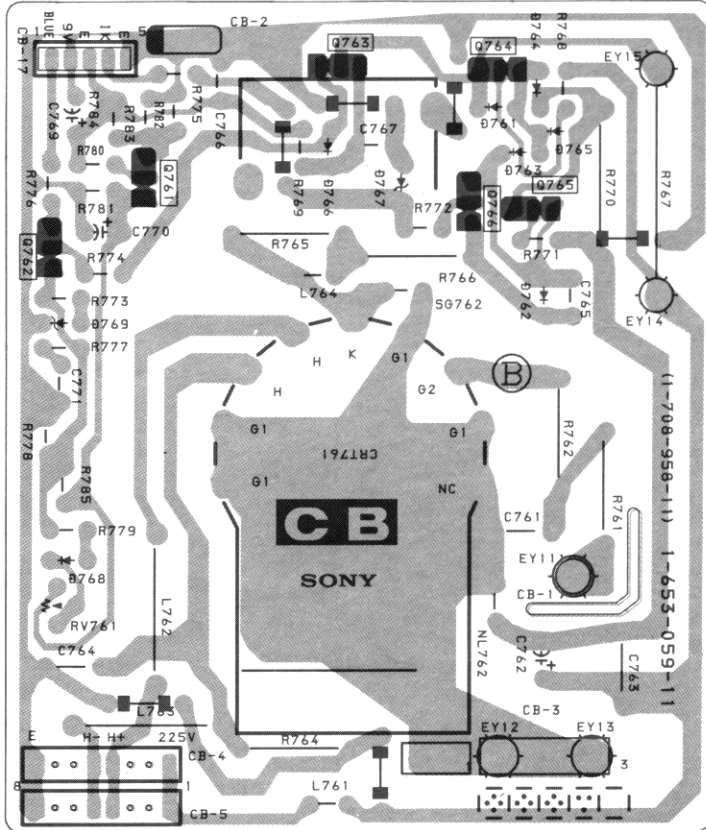
BOARD —



— CG BOARD —

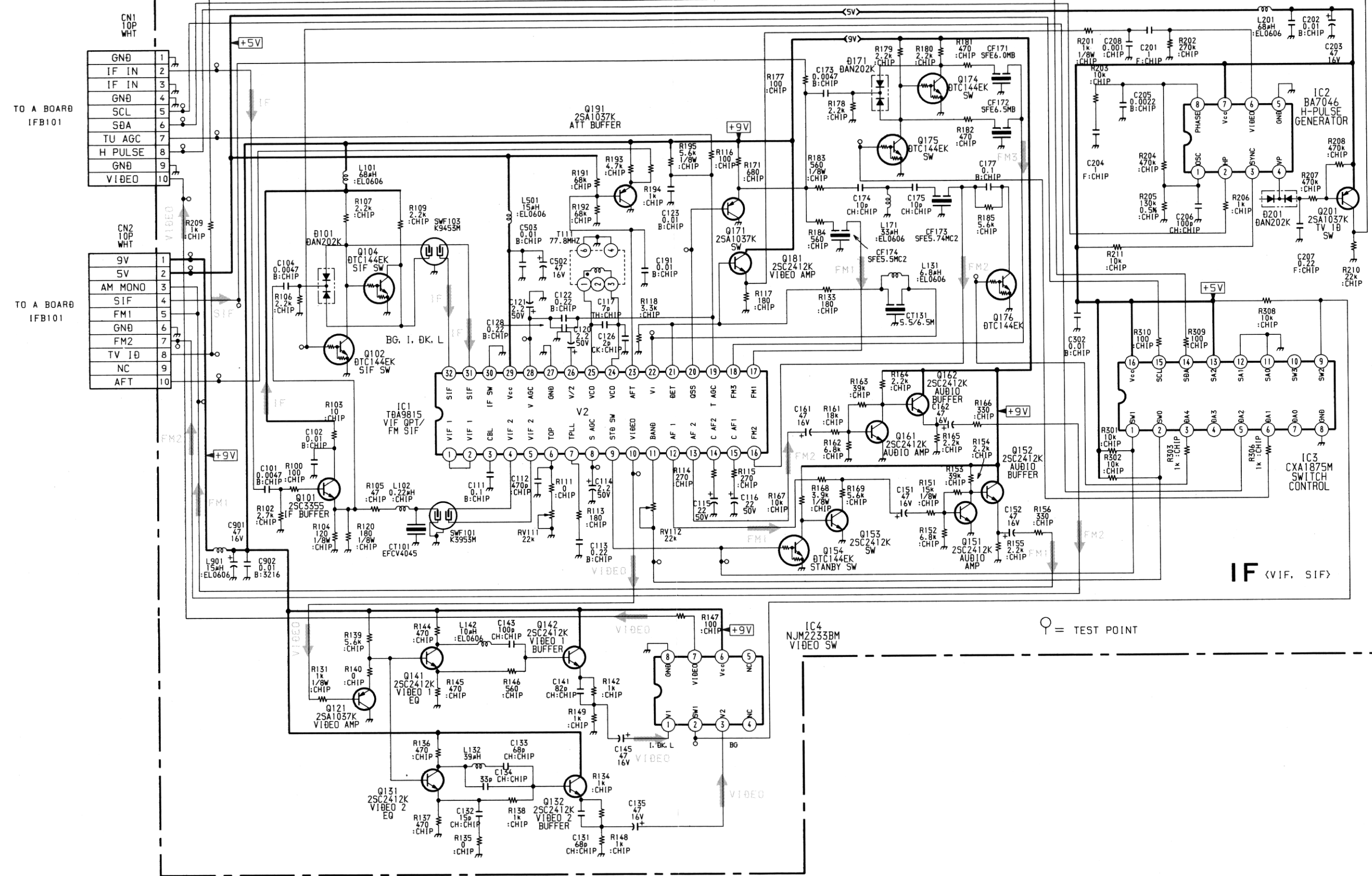


— CB BOARD —



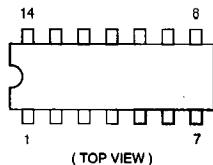
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IFH-389FX

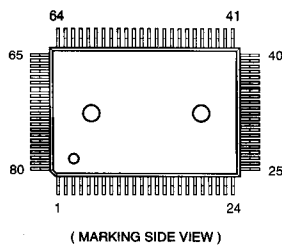


5-4. SEMICONDUCTORS

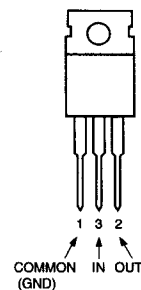
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LM324N
MB3614
μPC1394C



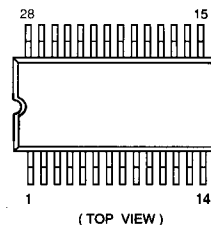
CXD2024Q



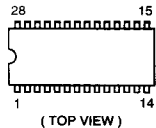
NJM79M05FA
NJM7915FA



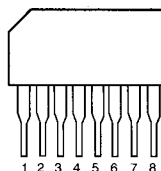
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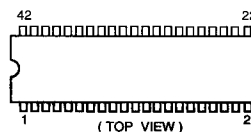
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TDA4650/V4
TDA6612



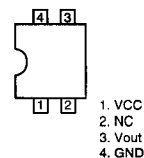
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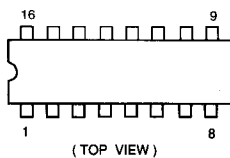
PA0036



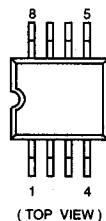
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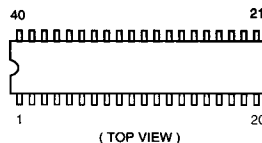
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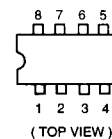
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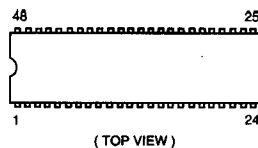
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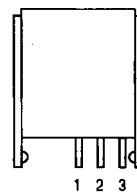
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CXA1855S



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NJM78L05A



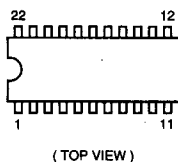
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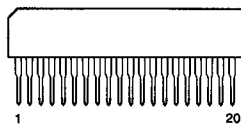
TA78L005AP



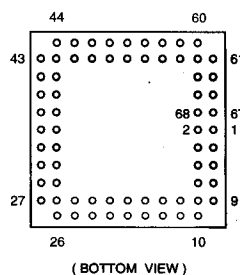
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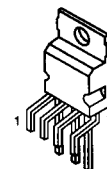
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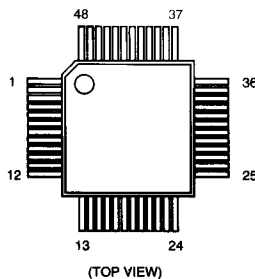
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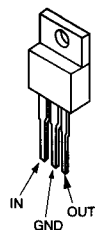
TDA2052



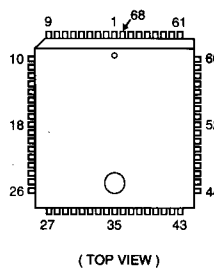
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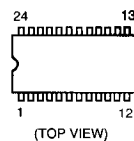
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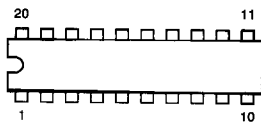
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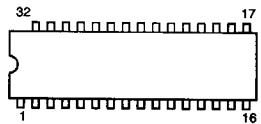


TDA8732



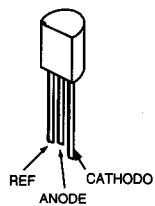
(TOP VIEW)

TDA9160A

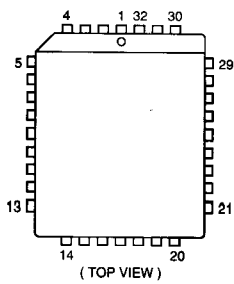


(TOP VIEW)

TL431CLP

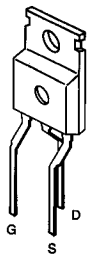


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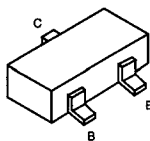
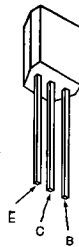


(TOP VIEW)

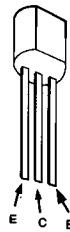
BUZ91A-E3155



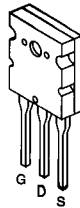
DTA124EK 2SA1037K
DTA144EK 2SA1162-G
DTC114EK 2SC2412K
DTC124EK 2SC1623-L5L6
DTC144EK 2SC2413K

DTA144ES
DTC144ES

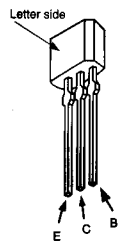
JC501
2SA1013-O
2SA1091-O
2SA1837
2SC2551-O
2SD788-5



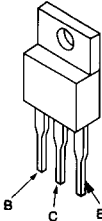
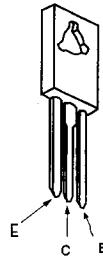
2SA1301-O



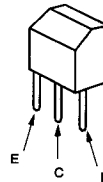
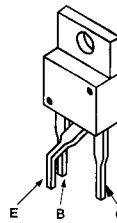
2SA1309A-Q
2SA1175-HFE
2SC2785-HFE
2SC3311A-QRS



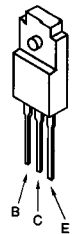
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2SB1094-LK
2SC3675
2SD1406-YGF

2SB649A-C
2SC2688-LK

2SC3733

2SC4256CB
2SC4632-CB7

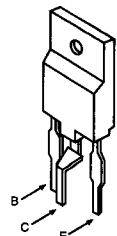
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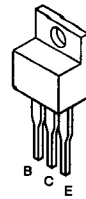
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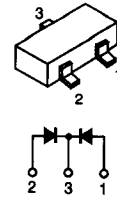
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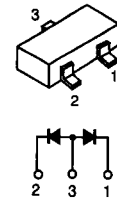
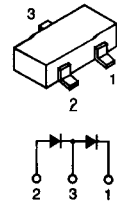
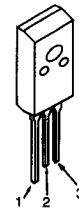
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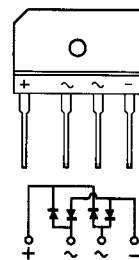
DAN202K



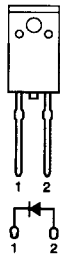
DAP202K

DA204K
1SS226D10SC6M
D10SC9M

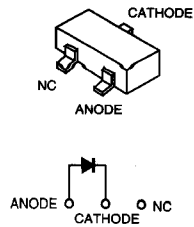
D4SB60L



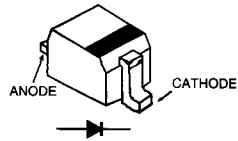
D5L60



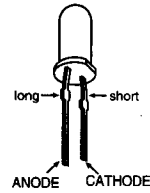
MA3030-H



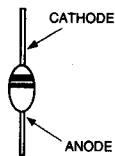
1SV214
1SV217



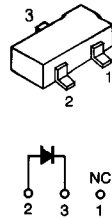
TLR124



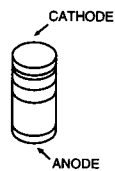
EL1Z
ERC38-08
GP08D
RGP10G
V06C
V09G
V19E
V30N



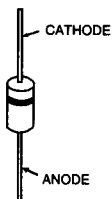
MA3039H
MA3056



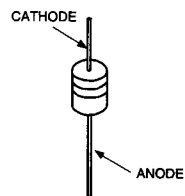
MA3051L



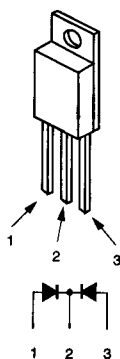
ERC06-15S
ERC25-06S
RU-1C
RU-2AM
RU-3AM
S3V10SB



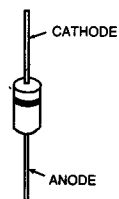
MTZJ-3.9A	MTZJ-33C
MTZJ-5.1B	MTZJ-39B
MTZJ-5.6B	RD2.0ESB1
MTZJ-7.5A	RD5.1ESB2
MTZJ-9.1	RD5.6ESB2
MTZJ-12	RD7.5ESB2
MTZJ-13B	RD9.1ESB3
MTZJ-13C	1SS119
MTZJ-22	1SS133



ESAC92M-02



SB140



SECTION 6

EXPLODED VIEWS

NOTE :

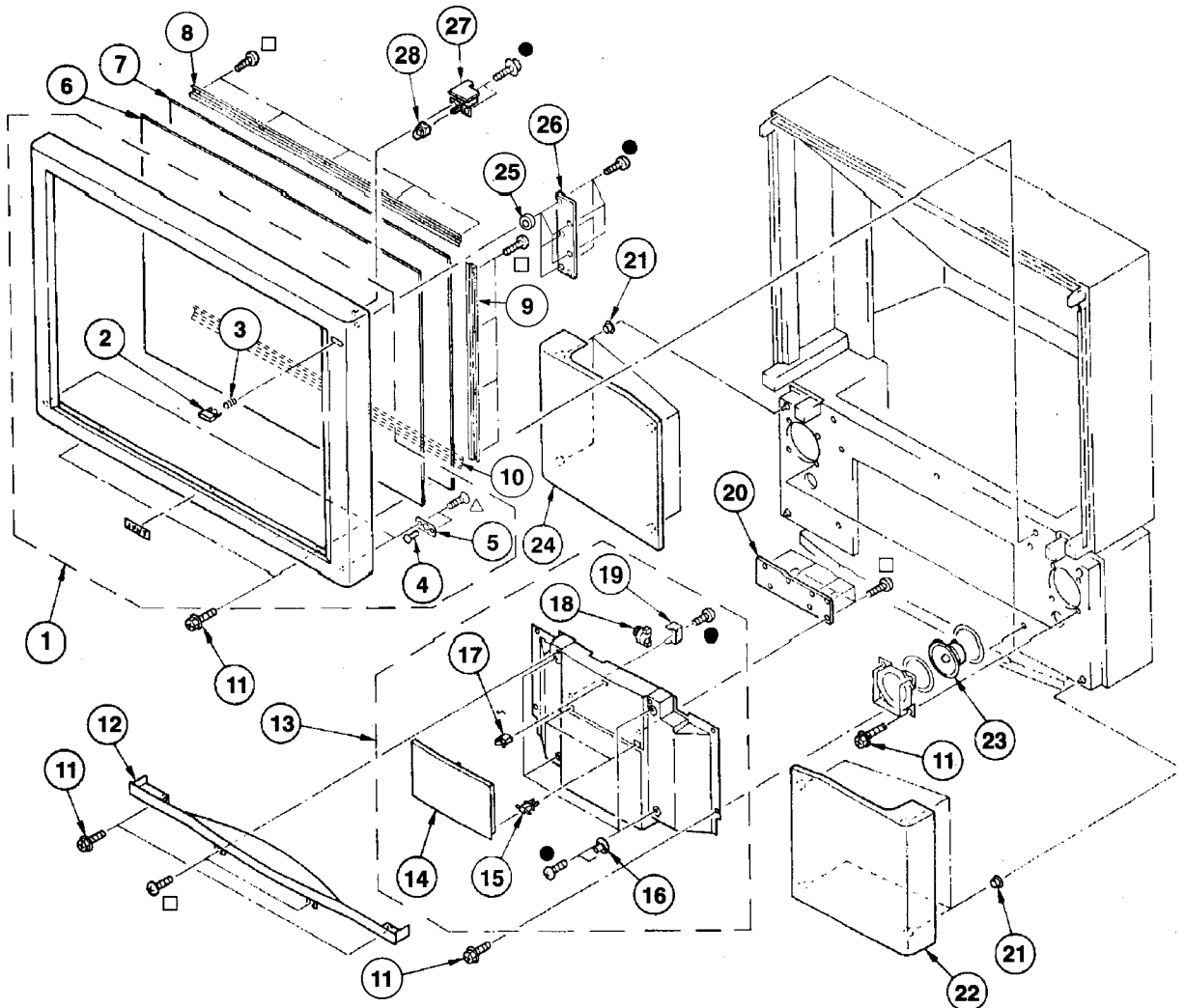
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and marked * are critical for safety.

Replace only with the part number specified.

6-1. CONTROL PANEL

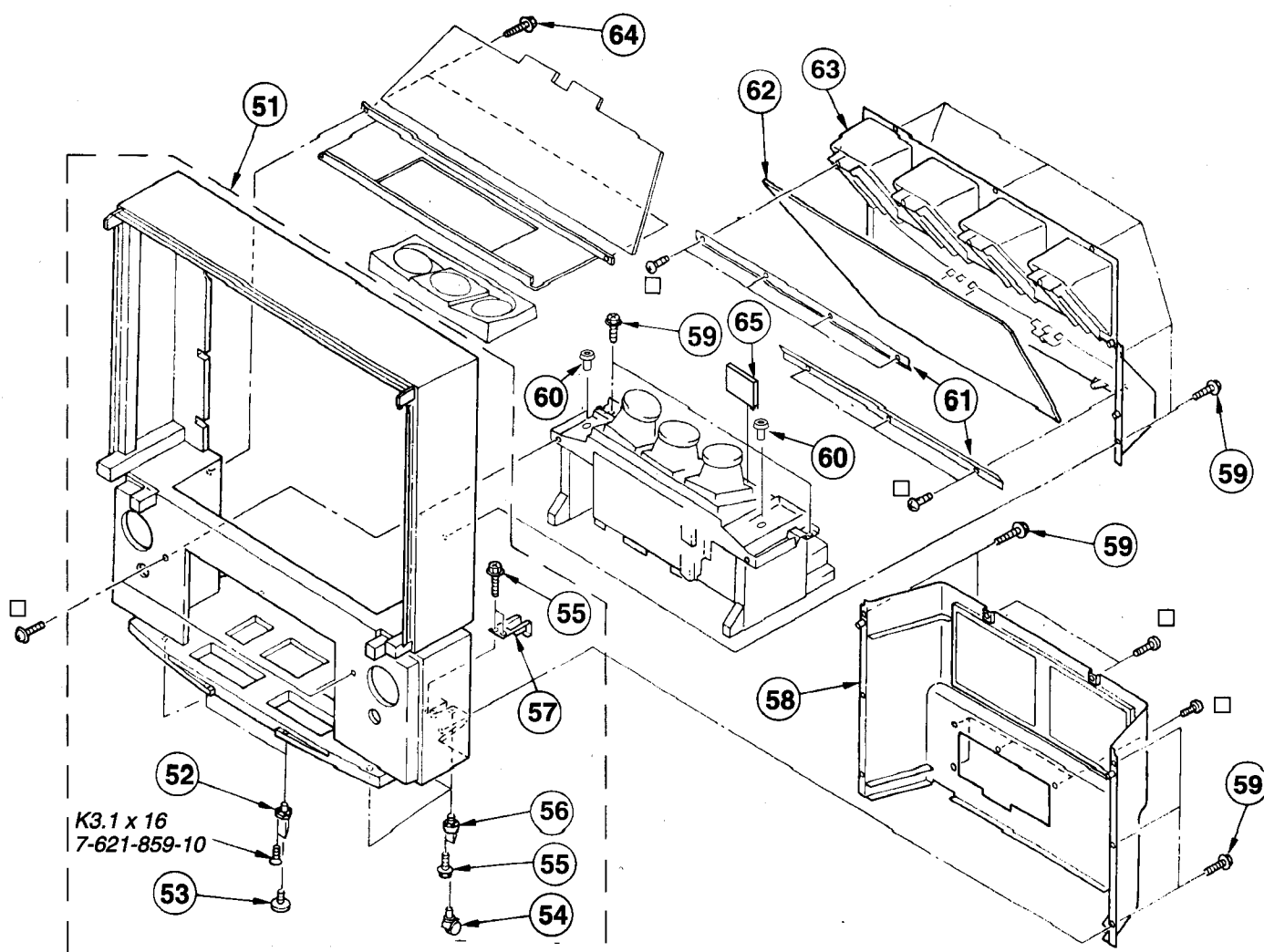
- : BVTP 3X12 7-685-648-79
- : BVTP 4X12 7-685-661-79
- △ : KTP 3X12 7-685-248-14



REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
1	X-4030-609-1	FRAME ASSY, SCREEN	2-5	15	3-703-035-12	SHAFT, LID	
2	4-037-635-01	BUTTON, POWER		16	4-843-806-00	STRIKE	
3	3-308-717-00	SPRING, COMPRESSION		17	4-392-036-01	CATCHER, PUSH	
4	4-838-452-00	STRIKE		18	3-721-204-21	DAMPER	
5	4-838-453-00	SUPPORT		19	4-397-047-01	HOLDER, DAMPER	
6	4-037-360-11	PLATE (L), DIFFUSION		20	*1-644-711-11	H2 BOARD	
7	4-037-359-11	PLATE (F), DIFFUSION		21	4-838-438-00	LATCH	
8	4-036-091-51	HOLDER (L) SCREEN		22	X-4030-569-1	GRILLE (R) ASSY, SPEAKER	
9	4-036-092-21	HOLDER (S) SCREEN		23	1-504-145-11	SPEAKER (12CM)	
10	4-036-091-21	HOLDER (S) SCREEN		24	X-4030-570-1	GRILLE (L) ASSY, SPEAKER	
11	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD		25	7-688-000-29	WASHER 10 BLOCK	
12	4-037-629-01	ESCUTCHEON, FRONT, FINAL		26	*1-644-710-11	H1 BOARD	
13	X-4030-605-1	PANEL ASSY, CONTROL	14-19	27	*1-644-712-11	H3 BOARD	
14	4-037-632-01	LID, FINAL CONTROL		28	4-037-636-01	ADAPTOR, BUTTON	

6-2. CABINET

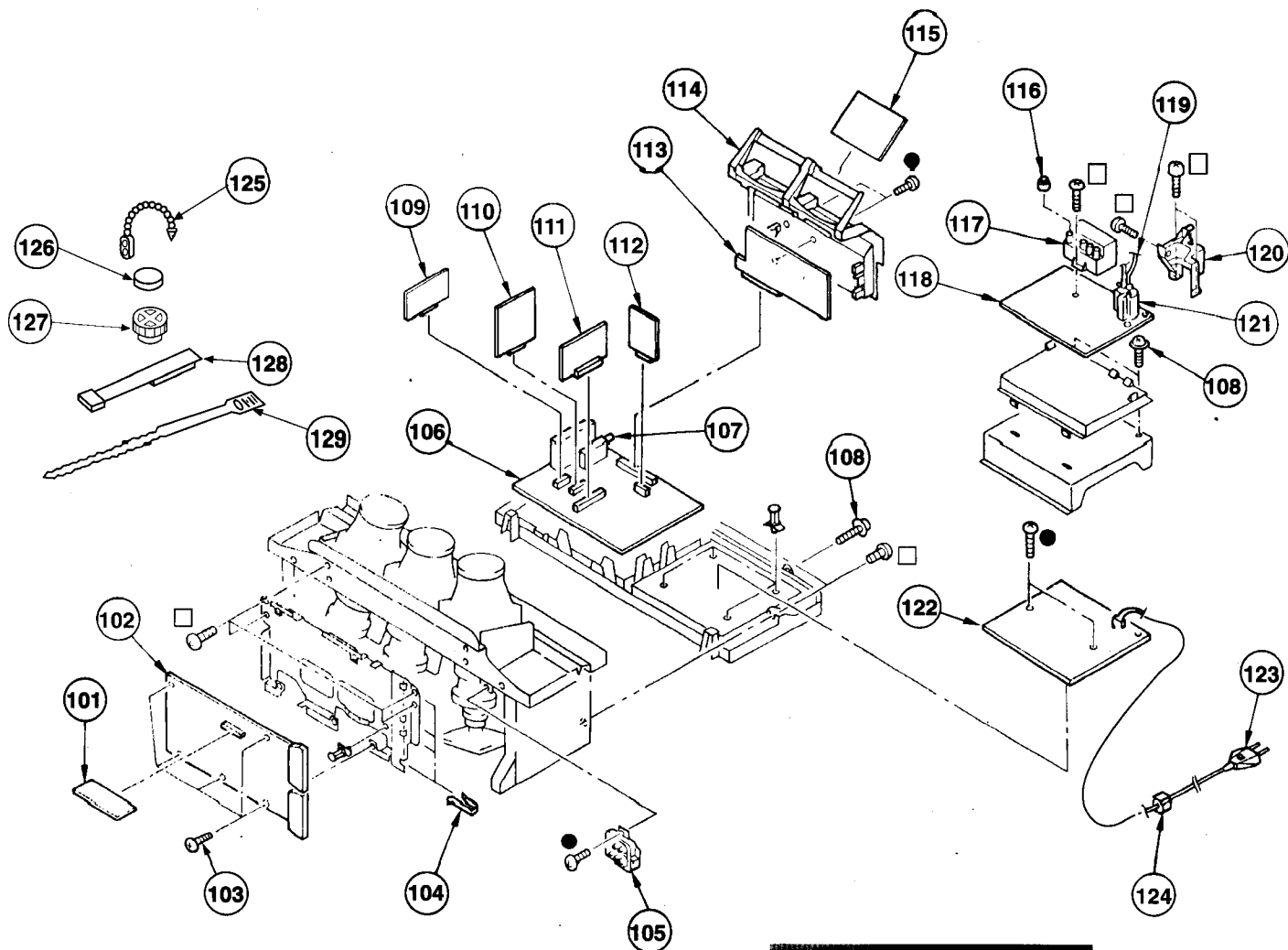
□: BVTP 4X12 7-685-661-79




REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
51	X-4030-603-1	CABINET ASSY	52-57	58	X-4030-604-3	COVER ASSY, BACK	
52	4-037-473-01	NUT, FITTING		59	4-378-522-31	SCREW, TAPPING, HEXAGON HEAD	
53	4-037-472-01	LEG, ADJUSTABLE		60	4-202-887-01	RIVET ALUMINIUM	
54	4-032-343-11	CASTER		61	4-037-351-01	HOLDER MIRROR	
55	4-378-522-11	SCREW, TAPPING, HEXAGON HEAD		62	4-037-534-01	MIRROR (46"), REFLECTION	
56	4-030-850-01	SOCKET, CASTER		63	4-036-462-01	COVER (46"), MIRROR	
57	4-037-639-01	BRACKET, AC CORD		64	4-378-522-21	SCREW, TAPPING, HEXAGON HEAD	
				65	A-1642-141-A	E2 BOARD, COMPLETE	

6-3. CHASSIS

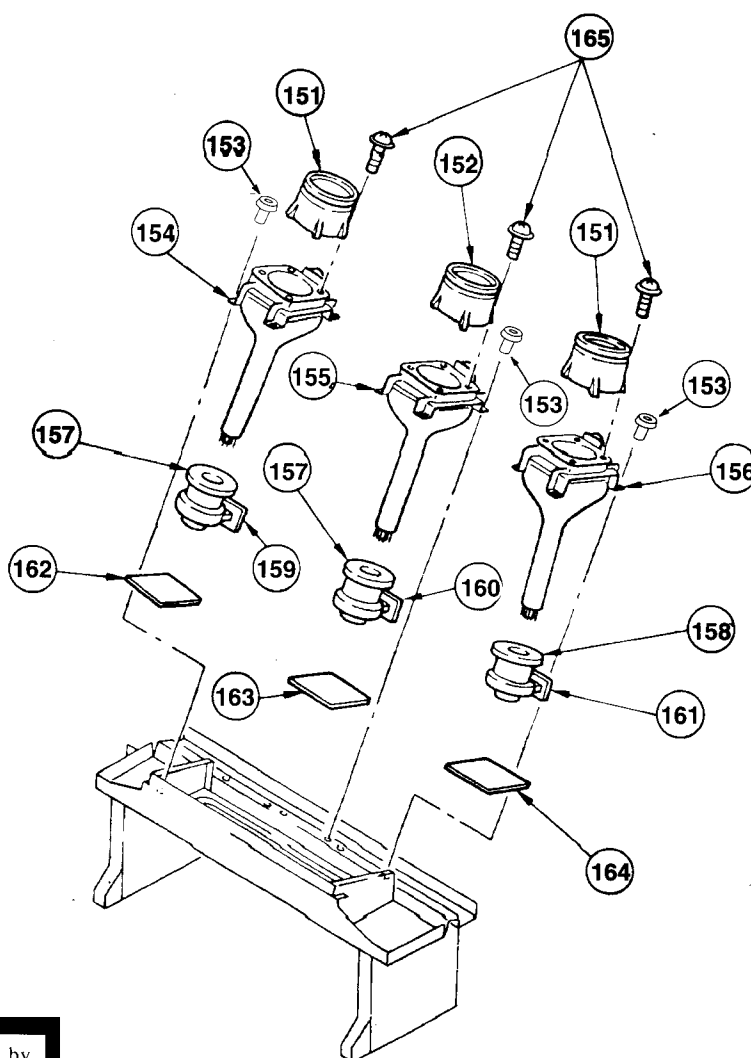
- : BVTP 3x12 7-685-648-79
 □ : BVTP 4x12 7-685-661-79



The components identified by shading and marked  are critical for safety.
 Replace only with the part number specified.

REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
101	*1-650-883-12	DS BOARD		116	4-373-137-01	CAP (Z), RUBBER	
102	*A-1640-159-A	D BOARD, COMPLETE		117	1-453-108-11	DC BLOCK, HIGH-VOLTAGE	
103	4-302-428-03	SCREW (WASHER HEAD) (+P 3X12)		118	*A-1678-079-A	N BOARD, COMPLETE	
104	*4-393-401-01	SPRING, TRANSISTOR		119	1-559-865-41	LEAD ASSY, HIGH-VOLTAGE	
105	1-241-744-11	RESISTOR ASSY (HIGH-VOLTAGE)		120	4-034-482-01	COVER, FBT	
106	*A-1632-207-A	A BOARD, COMPLETE		121	1-453-121-11	TRANSFORMER ASSY, FLYBACK (NX-263084)	
107	1-693-185-11	TUNER (UV916H)		122	*A-1637-002-A	G BOARD, COMPLETE	
108	3-701-810-91	SCREW, TERMINAL		123	1-765-286-11	CORD, POWER	
109	*A-1630-303-A	A1 BOARD, COMPLETE		124	4-389-201-11	HOLDER, AC CORD	
110	*A-1644-054-A	VM BOARD, COMPLETE		125	4-308-870-00	CLIP, LEAD WIRE	
111	*A-1635-029-A	M2 BOARD, COMPLETE		126	1-452-032-00	MAGNET, DISK; 10MM Ø	
112	*A-1620-049-A	B BOARD, COMPLETE		127	1-452-094-00	MAGNET, ROTATABLE DISK: 15MM Ø	
113	*A-1388-158-A	J BOARD, COMPLETE		128	X-4387-214-1	PERMALLOY ASSY, CORRECTION	
114	*4-037-620-01	BRACKET, J		129	3-701-007-00	BAND, BINDING	
115	*A-1622-006-A	P1 BOARD, COMPLETE					

6-4. PICTURE TUBE



The components identified by shading and marked **▲** are critical for safety.
Replace only with the part number specified.

REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
151	4-034-057-01	LENS (LINNIT)		159	*1-653-061-11	ZR BOARD	
152	4-034-057-11	LENS (LINNIT)		160	*1-653-062-11	ZG BOARD	
153	4-202-887-01	RIVET ALMINIUM		161	*1-653-063-11	ZB BOARD	
154	▲ 8-736-074-05	PICTURE TUBE (SD-279) (07MAB2 (R))		162	*A-1638-049-A	CR BOARD, COMPLETE	
155	▲ 8-736-072-05	PICTURE TUBE (SD-279) (07MAB2 (G))		163	*A-1638-051-A	CG BOARD, COMPLETE	
156	▲ 8-736-073-05	PICTURE TUBE (SD-279) (07MAB2 (B))		164	*A-1638-050-A	CB BOARD, COMPLETE	
157	▲ 8-451-441-11	DEFLECTION YOKE (Y829PA (R,G))		165	3-701-810-91	SCREW, TERMINAL	
	8-451-441-21	DEFLECTION YOKE (Y829PAN2 (B))					

SECTION 7

ELECTRICAL PARTS LIST

The components identified by shading and marked * are critical for safety. Replace only with the part number specified.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

When indicating parts by reference number, please include the board name.

CAPACITORS

MF : mF, PF : mmF

COILS

MMH : mH, μ H : mH

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F : nonflammable

H1

H2

H3

J

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*1-644-710-11	H1 BOARD *****		JR082	1-216-296-00	METAL GLAZE 0 5% 1/8W	
	4-033-777-01	HOLDER, LED		R082	1-249-429-11	CARBON 10K 5% 1/4W	
	*4-374-987-01	GUIDE, LIGHT		R083	1-249-425-11	CARBON 4.7K 5% 1/4W	
	4-381-686-01	BRACKET (B), LIGHT GUIDE		R084	1-249-421-11	CARBON 2.2K 5% 1/4W	
	< CONNECTOR >			R085	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
CN0732	*1-564-522-11	PLUG, CONNECTOR 7P		R086	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
	< DIODE >				< SWITCH >		
D092	8-719-812-41	DIODE TLR124		S082	1-571-731-11	SWITCH, TACTIL	
D093	8-719-812-41	DIODE TLR124		S083	1-571-731-11	SWITCH, TACTIL	
D094	8-719-812-41	DIODE TLR124		S084	1-571-731-11	SWITCH, TACTIL	
	< IC >				*****		
IC091	8-741-810-09	IC SBX1810-09			*1-644-712-11	H3 BOARD *****	
	< RESISTOR >				< CONNECTOR >		
R091	1-249-413-11	CARBON 470 5% 1/4W		CN0959	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
	*****			CN0960	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
	*1-644-711-11	H2 BOARD *****			< SWITCH >		
	< CAPACITOR >			S095	*1-692-293-11	SWITCH, PUSH (AC POWER) (1 KEY)	
C083	1-101-005-00	CERAMIC 0.022MF	50V		*****		
C084	1-101-005-00	CERAMIC 0.022MF	50V		*A-1388-158-A	J BOARD, COMPLETE *****	
	< CONNECTOR >				< CAPACITOR >		
CN0808	*1-564-525-11	PLUG, CONNECTOR 10P		C250	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
CN0819	*1-564-518-11	PLUG, CONNECTOR 3P		C281	1-124-442-00	ELECT 330MF 20% 6.3V	
CN0831	*1-564-519-11	PLUG, CONNECTOR 4P		C291	1-101-005-00	CERAMIC 0.022MF 50V	
	< JACK >			C292	1-101-005-00	CERAMIC 0.022MF 50V	
J081	1-565-931-11	TERMINAL BLOCK, S 3P		C293	1-102-125-00	CERAMIC 0.0047MF 10% 50V	
J082	1-691-293-11	JACK		C294	1-102-125-00	CERAMIC 0.0047MF 10% 50V	
	< COIL >			C295	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	
L081	1-408-409-00	INDUCTOR 10UH		C296	1-163-009-11	CERAMIC CHIP 0.001MF 10% 50V	
L082	1-408-409-00	INDUCTOR 10UH		C901	1-163-017-00	CERAMIC CHIP 0.0047MF 10% 50V	
	< RESISTOR >			C902	1-163-017-00	CERAMIC CHIP 0.0047MF 10% 50V	
JR081	1-216-296-00	METAL GLAZE 0 5% 1/8W		C904	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
				C905	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
				C906	1-101-004-00	CERAMIC 0.01MF 50V	
				C907	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
				C908	1-163-133-00	CERAMIC CHIP 470PF 5% 50V	
				C909	1-101-004-00	CERAMIC 0.01MF 50V	

REF.NO.	PART NO.	DESCRIPTION	REMARK
C910	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C911	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C912	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C913	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C914	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C915	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C916	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C917	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C918	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C919	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C920	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C921	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C922	1-124-477-11	ELECT 47MF	20% 16V
C923	1-164-346-11	CERAMIC CHIP 1MF	16V
C924	1-124-477-11	ELECT 47MF	20% 16V
C925	1-124-477-11	ELECT 47MF	20% 16V
C926	1-164-346-11	CERAMIC CHIP 1MF	16V
C927	1-124-477-11	ELECT 47MF	20% 16V
C928	1-124-477-11	ELECT 47MF	20% 16V
C929	1-124-477-11	ELECT 47MF	20% 16V
C930	1-124-477-11	ELECT 47MF	20% 16V
C931	1-164-346-11	CERAMIC CHIP 1MF	16V
C932	1-164-346-11	CERAMIC CHIP 1MF	16V
C933	1-124-477-11	ELECT 47MF	20% 16V
C934	1-124-477-11	ELECT 47MF	20% 16V
C935	1-124-477-11	ELECT 47MF	20% 16V
C936	1-164-346-11	CERAMIC CHIP 1MF	16V
C937	1-164-346-11	CERAMIC CHIP 1MF	16V
C938	1-124-477-11	ELECT 47MF	20% 16V

< CONNECTOR >

CN1209	1-695-302-11	CONNECTOR, BOARD TO BOARD 50P
CN1210	*1-564-522-11	PLUG, CONNECTOR 7P
CN1240	*1-564-519-11	PLUG, CONNECTOR 4P

< DIODE >

D201	8-719-924-11	DIODE MTZJ-22
D202	8-719-924-11	DIODE MTZJ-22
D203	8-719-924-11	DIODE MTZJ-22
D204	8-719-924-11	DIODE MTZJ-22
D901	8-719-923-60	DIODE MTZJ-9.1A
D902	8-719-923-60	DIODE MTZJ-9.1A
D903	8-719-923-60	DIODE MTZJ-9.1A
D904	8-719-923-60	DIODE MTZJ-9.1A
D905	8-719-923-60	DIODE MTZJ-9.1A
D906	8-719-923-60	DIODE MTZJ-9.1A
D907	8-719-923-60	DIODE MTZJ-9.1A
D908	8-719-923-60	DIODE MTZJ-9.1A
D909	8-719-923-60	DIODE MTZJ-9.1A
D910	8-719-923-60	DIODE MTZJ-9.1A
D911	8-719-923-60	DIODE MTZJ-9.1A
D912	8-719-923-60	DIODE MTZJ-9.1A
D913	8-719-923-60	DIODE MTZJ-9.1A
D914	8-719-923-60	DIODE MTZJ-9.1A
D915	8-719-923-60	DIODE MTZJ-9.1A
D916	8-719-923-60	DIODE MTZJ-9.1A
D917	8-719-923-60	DIODE MTZJ-9.1A
D918	8-719-923-60	DIODE MTZJ-9.1A
D919	8-719-923-60	DIODE MTZJ-9.1A
D920	8-719-923-60	DIODE MTZJ-9.1A
D921	8-719-923-60	DIODE MTZJ-9.1A

REF.NO.	PART NO.	DESCRIPTION	REMARK
D922	8-719-923-60	DIODE MTZJ-9.1A	
D923	8-719-923-60	DIODE MTZJ-9.1A	
D924	8-719-923-60	DIODE MTZJ-9.1A	
D925	8-719-923-60	DIODE MTZJ-9.1A	
D926	8-719-923-60	DIODE MTZJ-9.1A	
D927	8-719-923-60	DIODE MTZJ-9.1A	
D928	8-719-923-60	DIODE MTZJ-9.1A	
< SOCKET >			
J291	1-536-996-21	TERMINAL BOARD, INPUT/OUTPUT	
J901	1-695-296-11	TERMINAL BLOCK, S	
J903	1-695-549-11	SOCKET, PIN 21P	
J904	1-695-296-11	TERMINAL BLOCK, S	
J905	1-695-549-11	SOCKET, PIN 21P	
	1-695-293-11	SOCKET 21P ; J905	
J906	1-695-296-11	TERMINAL BLOCK, S	
J907	1-695-549-11	SOCKET, PIN 21P	
	1-695-293-11	SOCKET 21P ; J907	
< COIL >			
L291	1-402-711-11	INDUCTOR, WIDEBAND	
L292	1-402-711-11	INDUCTOR, WIDEBAND	
L294	1-402-711-11	INDUCTOR, WIDEBAND	
L295	1-402-711-11	INDUCTOR, WIDEBAND	
< TRANSISTOR >			
Q281	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q282	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q283	8-729-216-22	TRANSISTOR 2SA1162-G	

< RESISTOR >

JR201	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR901	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR905	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR909	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR910	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR911	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR915	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR917	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR918	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR921	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR923	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR924	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR926	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR927	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR928	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR935	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR939	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR940	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR942	1-216-171-00	METAL GLAZE	75	5%	1/8W
JR944	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR946	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR947	1-216-295-91	METAL GLAZE	0	5%	1/10W
JR952	1-216-296-00	METAL GLAZE	0	5%	1/8W
JR954	1-216-295-91	METAL GLAZE	0	5%	1/10W
R283	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R284	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R286	1-216-097-00	METAL GLAZE	100K	5%	1/10W
R287	1-216-216-00	METAL GLAZE	5.6K	5%	1/8W
R288	1-216-216-00	METAL GLAZE	5.6K	5%	1/8W

REF.NO.	PART NO.	DESCRIPTION	REMARK			REF.NO.	PART NO.	DESCRIPTION	REMARK		
R289	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W	R961	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R291	1-249-413-11	CARBON	470	5%	1/4W	R965	1-216-178-00	METAL GLAZE	150	5%	1/8W
R292	1-249-413-11	CARBON	470	5%	1/4W	R966	1-216-178-00	METAL GLAZE	150	5%	1/8W
R901	1-216-039-00	METAL GLAZE	390	5%	1/10W	R967	1-216-178-00	METAL GLAZE	150	5%	1/8W
R902	1-216-039-00	METAL GLAZE	390	5%	1/10W	R990	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R903	1-216-113-00	METAL GLAZE	470K	5%	1/10W	R991	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R904	1-216-113-00	METAL GLAZE	470K	5%	1/10W	R992	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R905	1-216-188-00	METAL GLAZE	390	5%	1/8W	R993	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R906	1-216-039-00	METAL GLAZE	390	5%	1/10W	R994	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R907	1-216-178-00	METAL GLAZE	150	5%	1/8W	R995	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R908	1-216-178-00	METAL GLAZE	150	5%	1/8W	R996	1-216-202-00	METAL GLAZE	1.5K	5%	1/8W
R909	1-216-113-00	METAL GLAZE	470K	5%	1/10W	R997	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R910	1-216-113-00	METAL GLAZE	470K	5%	1/10W	R998	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R911	1-216-022-00	METAL GLAZE	75	5%	1/10W	R999	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R913	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	*****					
R914	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	*A-1620-049-A B BOARD, COMPLETE					
R915	1-216-113-00	METAL GLAZE	470K	5%	1/10W	*****					
R916	1-216-113-00	METAL GLAZE	470K	5%	1/10W	< CAPACITOR >					
R917	1-216-022-00	METAL GLAZE	75	5%	1/10W	C1301	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R919	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	C1302	1-126-101-11	ELECT	100MF	20%	16V
R920	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	C1303	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R921	1-216-022-00	METAL GLAZE	75	5%	1/10W	C1304	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R922	1-216-222-00	METAL GLAZE	10K	5%	1/8W	C1305	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
R923	1-216-039-00	METAL GLAZE	390	5%	1/10W	C1306	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
R924	1-216-039-00	METAL GLAZE	390	5%	1/10W	C1307	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R925	1-216-089-00	METAL GLAZE	47K	5%	1/10W	C1308	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
R926	1-216-039-00	METAL GLAZE	390	5%	1/10W	C1309	1-163-101-00	CERAMIC CHIP	22PF	5%	50V
R927	1-216-039-00	METAL GLAZE	390	5%	1/10W	C1310	1-126-101-11	ELECT	100MF	20%	16V
R928	1-216-089-00	METAL GLAZE	47K	5%	1/10W	C1311	1-163-038-91	CERAMIC CHIP	0.1MF		25V
R929	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	C1312	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
R930	1-216-113-00	METAL GLAZE	470K	5%	1/10W	C1313	1-104-792-51	ELECT	33MF	20%	16V
R931	1-216-212-00	METAL GLAZE	3.9K	5%	1/8W	C1314	1-126-101-11	ELECT	100MF	20%	16V
R932	1-216-113-00	METAL GLAZE	470K	5%	1/10W	C1315	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R933	1-216-073-00	METAL GLAZE	10K	5%	1/10W	C1316	1-126-101-11	ELECT	100MF	20%	16V
R934	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	C1317	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R935	1-216-022-00	METAL GLAZE	75	5%	1/10W	C1319	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R937	1-216-113-00	METAL GLAZE	470K	5%	1/10W	C1320	1-163-141-00	CERAMIC CHIP	0.001MF	5%	50V
R938	1-216-039-00	METAL GLAZE	390	5%	1/10W	C1321	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R939	1-216-188-00	METAL GLAZE	390	5%	1/8W	C1322	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R940	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	C1323	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R941	1-216-113-00	METAL GLAZE	470K	5%	1/10W	C1324	1-126-101-11	ELECT	100MF	20%	16V
R942	1-216-188-00	METAL GLAZE	390	5%	1/8W	C1325	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R943	1-216-089-00	METAL GLAZE	47K	5%	1/10W	C1326	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R944	1-216-188-00	METAL GLAZE	390	5%	1/8W	C1327	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R945	1-216-089-00	METAL GLAZE	47K	5%	1/10W	C1328	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R946	1-216-022-00	METAL GLAZE	75	5%	1/10W	C1329	1-163-038-91	CERAMIC CHIP	0.1MF		25V
R947	1-216-178-00	METAL GLAZE	150	5%	1/8W	C1330	1-163-038-91	CERAMIC CHIP	0.1MF		25V
R948	1-216-073-00	METAL GLAZE	10K	5%	1/10W	C1331	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R949	1-216-113-00	METAL GLAZE	470K	5%	1/10W	C1332	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R950	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	C1333	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R951	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W	C1336	1-163-249-11	CERAMIC CHIP	82PF	5%	50V
R952	1-216-113-00	METAL GLAZE	470K	5%	1/10W	C1337	1-163-257-11	CERAMIC CHIP	180PF	5%	50V
R953	1-216-188-00	METAL GLAZE	390	5%	1/8W	C1338	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
R954	1-216-039-00	METAL GLAZE	390	5%	1/10W	C1339	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
R955	1-216-039-00	METAL GLAZE	390	5%	1/10W	C1340	1-124-477-11	ELECT	47MF	20%	16V
R956	1-216-089-00	METAL GLAZE	47K	5%	1/10W	C1341	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
R957	1-216-039-00	METAL GLAZE	390	5%	1/10W						
R958	1-216-089-00	METAL GLAZE	47K	5%	1/10W						
R959	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W						
R960	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W						

REF.NO.	PART NO.	DESCRIPTION	REMARK
< CONNECTOR >			
CN0302	1-573-299-21	CONNECTOR, BOARD TO BOARD 10P	
< DIODE >			
D1301	8-719-914-43	DIODE DAN202K	
< ENCAPSULATED FILTER >			
FL1301	1-239-550-41	FILTER, LOW PASS	
FL1302	1-239-550-41	FILTER, LOW PASS	
FL1303	1-239-930-11	FILTER, BAND PASS	
< IC >			
IC1301	8-752-357-88	IC CXD2024Q	
< COIL >			
L1301	1-408-405-00	INDUCTOR 4.7UH	
L1302	1-408-403-00	INDUCTOR 3.3UH	
L1303	1-408-405-00	INDUCTOR 4.7UH	
L1304	1-408-405-00	INDUCTOR 4.7UH	
L1307	1-408-421-00	INDUCTOR 100UH	
L1308	1-408-418-00	INDUCTOR 56UH	
< TRANSISTOR >			
Q1301	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1302	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1303	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1304	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1305	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1306	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1307	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1308	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1309	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1311	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1312	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1313	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1314	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1315	8-729-920-74	TRANSISTOR 2SC2412K-QR	
< RESISTOR >			
R1301	1-216-053-00	METAL GLAZE 1.5K 5% 1/10W	
R1302	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R1303	1-216-043-91	METAL GLAZE 560 5% 1/10W	
R1304	1-216-043-91	METAL GLAZE 560 5% 1/10W	
R1305	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R1306	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1307	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R1308	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R1309	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R1310	1-216-295-91	METAL GLAZE 0 5% 1/10W	
R1311	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1312	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R1313	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R1314	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1315	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1316	1-216-071-00	METAL GLAZE 8.2K 5% 1/10W	
R1317	1-216-083-00	METAL GLAZE 27K 5% 1/10W	
R1318	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R1319	1-216-043-91	METAL GLAZE 560 5% 1/10W	
R1320	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1321	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1322	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R1324	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R1325	1-216-043-91	METAL GLAZE 560 5% 1/10W	
R1326	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R1327	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1328	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1329	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1330	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R1332	1-208-784-11	METAL CHIP 1.2K 0.50% 1/10W	
R1333	1-216-666-11	METAL CHIP 4.3K 0.50% 1/10W	
R1334	1-208-767-11	METAL CHIP 240 0.50% 1/10W	
R1335	1-216-637-11	METAL CHIP 270 0.50% 1/10W	
R1336	1-216-657-11	METAL CHIP 1.8K 0.50% 1/10W	
R1337	1-216-663-11	METAL CHIP 3.3K 0.50% 1/10W	
R1338	1-216-657-11	METAL CHIP 1.8K 0.50% 1/10W	
R1339	1-216-295-91	METAL GLAZE 0 5% 1/10W	
R1342	1-216-295-91	METAL GLAZE 0 5% 1/10W	
R1344	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
R1345	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R1346	1-216-039-00	METAL GLAZE 390 5% 1/10W	
R1347	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R1349	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R1352	1-216-295-91	METAL GLAZE 0 5% 1/10W	
R1353	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R1354	1-216-031-00	METAL GLAZE 180 5% 1/10W	
R1355	1-216-043-91	METAL GLAZE 560 5% 1/10W	
R1356	1-216-043-91	METAL GLAZE 560 5% 1/10W	
R1357	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1358	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1359	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1360	1-249-417-11	CARBON 1K 5% 1/4W	

*A-1622-006-A P1 BOARD, COMPLETE			

< CAPACITOR >			
C1401	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1402	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1403	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C1404	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
C1405	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C1406	1-163-097-00	CERAMIC CHIP 15PF	5% 50V
C1407	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1408	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V
C1409	1-124-903-11	ELECT 1MF	20% 50V
C1410	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1412	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1414	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C1416	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C1417	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C1419	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C1420	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1421	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1422	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1423	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1424	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1425	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1426	1-163-097-00	CERAMIC CHIP 15PF	5% 50V

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C1427	1-124-916-11	ELECT 22MF	20% 50V	FL1405	1-236-071-11	ENCAPSULATED COMPONENT	
C1428	1-163-038-91	CERAMIC CHIP 0.1MF	25V	FL1406	1-236-071-11	ENCAPSULATED COMPONENT	
C1429	1-163-097-00	CERAMIC CHIP 15PF	5% 50V	FL1407	1-236-071-11	ENCAPSULATED COMPONENT	
C1430	1-163-038-91	CERAMIC CHIP 0.1MF	25V	FL1408	1-236-071-11	ENCAPSULATED COMPONENT	
C1431	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	< IC >			
C1432	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	IC1401	8-759-183-35	IC TDA9160A	
C1433	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	IC1402	8-759-288-85	IC TDA4665T	
C1434	1-163-038-91	CERAMIC CHIP 0.1MF	25V	IC1403	8-759-248-15	IC SDA9187-2XGEG	
C1435	1-163-038-91	CERAMIC CHIP 0.1MF	25V	IC1404	8-759-324-35	IC SDA9188-3XPGE	
C1437	1-164-343-11	CERAMIC CHIP 0.056MF	10% 25V	IC1406	8-759-183-36	IC TDA8443B	
C1438	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	IC1410	8-759-295-82	IC L78L08ACZ-AP	
C1439	1-163-243-11	CERAMIC CHIP 47PF	5% 50V	< COIL >			
C1440	1-163-245-11	CERAMIC CHIP 56PF	5% 50V	L1401	1-408-418-00	INDUCTOR 56UH	
C1441	1-164-005-11	CERAMIC CHIP 0.47MF	25V	L1405	1-408-407-00	INDUCTOR 6.8UH	
C1442	1-164-005-11	CERAMIC CHIP 0.47MF	25V	L1406	1-408-407-00	INDUCTOR 6.8UH	
C1443	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	L1407	1-414-233-21	INDUCTOR, FERRITE BEAD	
C1444	1-164-005-11	CERAMIC CHIP 0.47MF	25V	L1408	1-414-233-21	INDUCTOR, FERRITE BEAD	
C1445	1-164-005-11	CERAMIC CHIP 0.47MF	25V	< TRANSISTOR >			
C1446	1-164-005-11	CERAMIC CHIP 0.47MF	25V	Q1401	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1451	1-163-007-11	CERAMIC CHIP 680PF	10% 50V	Q1402	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1452	1-163-038-91	CERAMIC CHIP 0.1MF	25V	Q1403	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1453	1-163-038-91	CERAMIC CHIP 0.1MF	25V	Q1404	8-729-216-22	TRANSISTOR 2SA1162-G	
C1454	1-163-038-91	CERAMIC CHIP 0.1MF	25V	Q1405	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1455	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	Q1406	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1456	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	Q1407	8-729-216-22	TRANSISTOR 2SA1162-G	
C1457	1-164-005-11	CERAMIC CHIP 0.47MF	25V	Q1408	8-729-216-22	TRANSISTOR 2SA1162-G	
C1458	1-164-505-11	CERAMIC CHIP 2.2MF	16V	Q1409	8-729-216-22	TRANSISTOR 2SA1162-G	
C1459	1-164-505-11	CERAMIC CHIP 2.2MF	16V	Q1413	8-729-216-22	TRANSISTOR 2SA1162-G	
C1460	1-163-038-91	CERAMIC CHIP 0.1MF	25V	Q1414	8-729-900-53	TRANSISTOR DTC114EK	
C1461	1-164-005-11	CERAMIC CHIP 0.47MF	25V	Q1416	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1462	1-164-005-11	CERAMIC CHIP 0.47MF	25V	Q1417	8-729-900-53	TRANSISTOR DTC114EK	
C1463	1-126-101-11	ELECT 100MF	20% 16V	Q1418	8-729-900-53	TRANSISTOR DTC114EK	
C1464	1-126-101-11	ELECT 100MF	20% 16V	Q1419	8-729-900-53	TRANSISTOR DTC114EK	
C1465	1-126-101-11	ELECT 100MF	20% 16V	Q1421	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1466	1-126-101-11	ELECT 100MF	20% 16V	Q1422	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1467	1-126-101-11	ELECT 100MF	20% 16V	Q1425	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1468	1-164-505-11	CERAMIC CHIP 2.2MF	16V	Q1426	8-729-920-74	TRANSISTOR 2SC2412K-QR	
C1469	1-164-505-11	CERAMIC CHIP 2.2MF	16V	Q1430	8-729-900-53	TRANSISTOR DTC114EK	
C1471	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	Q1431	8-729-901-04	TRANSISTOR DTA114EK	
C1472	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	< RESISTOR >			
C1473	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V	JR1401	1-216-295-91	METAL GLAZE 0 5% 1/10W	
C1481	1-164-005-11	CERAMIC CHIP 0.47MF	25V	JR1402	1-216-295-91	METAL GLAZE 0 5% 1/10W	
C1482	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	R1401	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
C1491	1-163-251-11	CERAMIC CHIP 100PF	5% 50V	R1402	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
< CONNECTOR >				R1403	1-216-025-00	METAL GLAZE 100 5% 1/10W	
CN1514	*1-568-879-11	PIN, CONNECTOR 4P		R1404	1-216-025-00	METAL GLAZE 100 5% 1/10W	
CN1515	*1-564-516-11	PLUG, CONNECTOR 13P		R1405	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
CN1516	*1-568-879-11	PIN, CONNECTOR 4P		R1406	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
CN1538	1-573-299-21	CONNECTOR, BOARD TO BOARD 10P		R1407	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
< DIODE >				R1408	1-216-041-00	METAL GLAZE 470 5% 1/10W	
D1401	8-719-401-41	DIODE MA3051L		R1410	1-216-029-00	METAL GLAZE 150 5% 1/10W	
D1403	8-719-914-43	DIODE DAN202K		R1411	1-216-041-00	METAL GLAZE 470 5% 1/10W	
D1404	8-719-914-42	DIODE DA204K		R1412	1-216-041-00	METAL GLAZE 470 5% 1/10W	
D1405	8-719-914-42	DIODE DA204K		R1413	1-216-041-00	METAL GLAZE 470 5% 1/10W	
< ENCAPSULATED FILTER >				R1414	1-216-045-00	METAL GLAZE 680 5% 1/10W	
FL1403	1-236-071-11	ENCAPSULATED COMPONENT					
FL1404	1-236-071-11	ENCAPSULATED COMPONENT					

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REF.NO.	PART NO.	DESCRIPTION	REMARK
R1415	1-216-045-00	METAL GLAZE 680 5%	1/10W
R1416	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R1417	1-216-033-00	METAL GLAZE 220 5%	1/10W
R1418	1-216-025-00	METAL GLAZE 100 5%	1/10W
R1419	1-216-027-00	METAL GLAZE 120 5%	1/10W
R1421	1-216-033-00	METAL GLAZE 220 5%	1/10W
R1422	1-216-023-00	METAL GLAZE 82 5%	1/10W
R1424	1-216-041-00	METAL GLAZE 470 5%	1/10W
R1425	1-216-041-00	METAL GLAZE 470 5%	1/10W
R1426	1-216-041-00	METAL GLAZE 470 5%	1/10W
R1427	1-216-041-00	METAL GLAZE 470 5%	1/10W
R1429	1-216-091-00	METAL GLAZE 56K 5%	1/10W
R1430	1-216-069-00	METAL GLAZE 6.8K 5%	1/10W
R1431	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1434	1-216-043-91	METAL GLAZE 560 5%	1/10W
R1435	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1436	1-216-043-91	METAL GLAZE 560 5%	1/10W
R1437	1-216-031-00	METAL GLAZE 180 5%	1/10W
R1438	1-216-045-00	METAL GLAZE 680 5%	1/10W
R1439	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R1441	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R1442	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R1443	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R1444	1-216-041-00	METAL GLAZE 470 5%	1/10W
R1445	1-216-083-00	METAL GLAZE 27K 5%	1/10W
R1449	1-216-033-00	METAL GLAZE 220 5%	1/10W
R1450	1-216-033-00	METAL GLAZE 220 5%	1/10W
R1453	1-216-025-00	METAL GLAZE 100 5%	1/10W
R1454	1-216-025-00	METAL GLAZE 100 5%	1/10W
R1455	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R1456	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R1457	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
R1458	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R1462	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R1464	1-216-093-00	METAL GLAZE 68K 5%	1/10W
R1465	1-216-093-00	METAL GLAZE 68K 5%	1/10W
R1466	1-216-295-91	METAL GLAZE 0 5%	1/10W
R1468	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R1469	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R1471	1-216-037-00	METAL GLAZE 330 5%	1/10W
R1481	1-216-089-00	METAL GLAZE 47K 5%	1/10W
R1483	1-216-079-00	METAL GLAZE 18K 5%	1/10W
R1484	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R1485	1-216-041-00	METAL GLAZE 470 5%	1/10W
R1486	1-216-033-00	METAL GLAZE 220 5%	1/10W
R1487	1-216-033-00	METAL GLAZE 220 5%	1/10W
R1493	1-216-075-00	METAL GLAZE 12K 5%	1/10W
R1494	1-216-025-00	METAL GLAZE 100 5%	1/10W
R1495	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R1496	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R1497	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R1498	1-216-053-00	METAL GLAZE 1.5K 5%	1/10W
R1499	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
< CRYSTAL >			
X1401	1-567-505-11	OSCILLATOR, CRYSTAL	
X1402	1-567-504-11	OSCILLATOR, CRYSTAL	
X1403	1-760-551-21	VIBRATOR, CERAMIC	

REF.NO.	PART NO.	DESCRIPTION	REMARK
*A-1630-303-A A1 BOARD, COMPLETE *****			
< CAPACITOR >			
C1101	1-126-101-11	ELECT 100MF	20% 16V
C1102	1-126-101-11	ELECT 100MF	20% 16V
C1103	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1104	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V
C1105	1-164-489-11	CERAMIC CHIP 0.22MF	10% 16V
C1106	1-163-187-00	CERAMIC CHIP 180PF	5% 50V
C1107	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1108	1-163-059-00	CERAMIC CHIP 0.01MF	50V
C1109	1-163-033-91	CERAMIC CHIP 0.022MF	50V
C1110	1-164-336-11	CERAMIC CHIP 0.33MF	25V
C1111	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1112	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
C1113	1-124-477-11	ELECT 47MF	20% 16V
C1114	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1115	1-124-477-11	ELECT 47MF	20% 16V
C1116	1-106-228-00	MYLAR 0.22MF	10% 100V
C1117	1-163-081-00	CERAMIC CHIP 0.22MF	25V
C1118	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C1119	1-163-193-00	CERAMIC CHIP 330PF	5% 50V
C1120	1-163-193-00	CERAMIC CHIP 330PF	5% 50V
C1121	1-163-113-00	CERAMIC CHIP 68PF	5% 50V
C1122	1-163-081-00	CERAMIC CHIP 0.22MF	25V
C1123	1-106-228-00	MYLAR 0.22MF	10% 100V
C1124	1-124-477-11	ELECT 47MF	20% 16V
C1125	1-124-477-11	ELECT 47MF	20% 16V
C1126	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V
C1127	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1128	1-124-477-11	ELECT 47MF	20% 16V
C1129	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1130	1-163-205-00	CERAMIC CHIP 0.001MF	10% 50V
C1131	1-163-059-00	CERAMIC CHIP 0.01MF	50V
C1132	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1133	1-124-907-11	ELECT 10MF	20% 50V
C1134	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1135	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1136	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C1137	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1138	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C1139	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C1140	1-163-181-00	CERAMIC CHIP 100PF	5% 50V
C1141	1-163-205-00	CERAMIC CHIP 0.001MF	5% 50V
C1142	1-163-019-00	CERAMIC CHIP 0.0068MF	50V
C1143	1-163-003-11	CERAMIC CHIP 330PF	10% 50V
C1144	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C1145	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C1146	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1147	1-124-477-11	ELECT 47MF	20% 16V
C1148	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
C1149	1-124-477-11	ELECT 47MF	20% 16V
C1150	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1151	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1152	1-124-477-11	ELECT 47MF	20% 16V
C1153	1-163-087-00	CERAMIC CHIP 4PF	0.25PF 50V
C1154	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C1155	1-124-477-11	ELECT 47MF	20% 16V
C1156	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V

REF.NO.	PART NO.	DESCRIPTION	REMARK
C1157	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C1158	1-163-038-91	CERAMIC CHIP 0.1MF	25V
< FILTER >			
BP1101	1-239-047-11	FILTER, BAND PASS	
CF1101	1-409-327-00	TRAP, CERAMIC (6.5MHZ)	
CF1102	1-404-134-00	TRAP, CERAMIC (5.5MHZ)	
< CONNECTOR >			
CN0201	1-695-300-11	CONNECTOR, BOARD TO BOARD 20P	
< DIODE >			
D1101	8-719-914-44	DIODE DAP202K	
D1102	8-719-027-70	DIODE 1SV217	
D1103	8-719-820-71	DIODE 1SV214	
< FERRITE BEAD >			
FB1101	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB1102	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB1103	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB1104	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB1105	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
FB1107	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
< IC >			
IC1101	8-759-511-88	IC TDA8732	
IC1102	8-759-073-17	IC SAA7282P	
< COIL >			
L1101	1-408-405-00	INDUCTOR 4.7UH	
L1102	1-408-405-00	INDUCTOR 4.7UH	
L1103	1-410-119-11	INDUCTOR 1MMH	
L1104	1-410-119-11	INDUCTOR 1MMH	
L1105	1-408-407-00	INDUCTOR 6.8UH	
< TRANSISTOR >			
Q1101	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1102	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1103	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1104	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1105	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1106	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1107	8-729-920-74	TRANSISTOR 2SC2412K-QR	
Q1108	8-729-920-74	TRANSISTOR 2SC2412K-QR	
< RESISTOR >			
JR1102	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR1103	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR1104	1-216-295-91	METAL GLAZE 0 5% 1/10W	
R1101	1-216-188-00	METAL GLAZE 390 5% 1/8W	
R1103	1-216-198-91	METAL GLAZE 1K 5% 1/8W	
R1104	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R1105	1-216-005-00	METAL GLAZE 15 5% 1/10W	
R1106	1-216-036-00	METAL GLAZE 300 5% 1/10W	
R1107	1-216-042-00	METAL GLAZE 510 5% 1/10W	
R1108	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
R1109	1-216-202-00	METAL GLAZE 1.5K 5% 1/8W	
R1110	1-216-196-00	METAL GLAZE 820 5% 1/8W	
R1111	1-216-041-00	METAL GLAZE 470 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1112	1-216-051-00	METAL GLAZE 1.2K 5% 1/10W	
R1113	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R1114	1-216-105-91	METAL GLAZE 220K 5% 1/10W	
R1115	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R1116	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1117	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R1118	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R1119	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1120	1-216-232-00	METAL GLAZE 27K 5% 1/8W	
R1121	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R1122	1-216-158-00	METAL GLAZE 22 5% 1/8W	
R1123	1-216-158-00	METAL GLAZE 22 5% 1/8W	
R1124	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R1125	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R1126	1-216-218-00	METAL GLAZE 6.8K 5% 1/8W	
R1127	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R1128	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R1129	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R1130	1-216-246-91	METAL GLAZE 100K 5% 1/8W	
R1131	1-216-218-00	METAL GLAZE 6.8K 5% 1/8W	
R1132	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R1133	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R1134	1-216-212-00	METAL GLAZE 3.9K 5% 1/8W	
R1135	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R1136	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R1137	1-216-095-00	METAL GLAZE 82K 5% 1/10W	
R1138	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R1139	1-216-005-00	METAL GLAZE 15 5% 1/10W	
R1140	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R1141	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
R1142	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1143	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1144	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1145	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R1146	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1147	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R1148	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1149	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R1150	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R1151	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1152	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1153	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R1154	1-216-041-00	METAL GLAZE 470 5% 1/10W	
< CRYSTAL >			
X1101	1-579-689-21	VIBRATOR, CRYSTAL	
X1102	1-579-282-21	VIBRATOR, CRYSTAL	

*A-1632-207-A A BOARD, COMPLETE			

4-201-023-11 SPACER, INSULATING			
< CAPACITOR >			
C001	1-130-777-00	FILM 0.1MF 5% 63V	
C071	1-124-041-00	ELECT 220MF 20% 16V	
C072	1-124-120-11	ELECT 220MF 20% 16V	
C073	1-163-125-00	CERAMIC CHIP 220PF 5% 50V	
C074	1-163-001-11	CERAMIC CHIP 220PF 10% 50V	



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C101	1-126-101-11	ELECT 100MF	20% 16V	C304	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C102	1-126-103-11	ELECT 470MF	20% 16V	C305	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C103	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C306	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C104	1-124-910-11	ELECT 47MF	20% 50V	C307	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C105	1-124-916-11	ELECT 22MF	20% 50V	C308	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V
C106	1-124-927-11	ELECT 4.7MF	20% 50V	C309	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C120	1-163-031-11	CERAMIC CHIP 0.01MF	50V	C310	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C201	1-130-489-00	FILM 0.033MF	5% 50V	C311	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V
C202	1-130-489-00	FILM 0.033MF	5% 50V	C312	1-124-910-11	ELECT 47MF	20% 50V
C203	1-164-005-11	CERAMIC CHIP 0.47MF	25V	C313	1-163-077-91	CERAMIC CHIP 0.1MF	50V
C204	1-164-005-11	CERAMIC CHIP 0.47MF	25V	C314	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C205	1-124-907-11	ELECT 10MF	20% 50V	C315	1-124-910-11	ELECT 47MF	20% 50V
C206	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V	C316	1-163-077-91	CERAMIC CHIP 0.1MF	50V
C207	1-137-613-11	FILM 0.0018MF	2% 100V	C317	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C208	1-164-005-11	CERAMIC CHIP 0.47MF	25V	C318	1-163-103-00	CERAMIC CHIP 27PF	5% 50V
C209	1-164-005-11	CERAMIC CHIP 0.47MF	25V	C319	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C210	1-164-005-11	CERAMIC CHIP 0.47MF	25V	C320	1-124-910-11	ELECT 47MF	20% 50V
C212	1-124-927-11	ELECT 4.7MF	20% 50V	C321	1-163-038-91	CERAMIC CHIP 0.1MF	25V
C213	1-163-023-00	CERAMIC CHIP 0.015MF	10% 50V	C322	1-124-916-11	ELECT 22MF	20% 50V
C214	1-163-023-00	CERAMIC CHIP 0.015MF	10% 50V	C323	1-163-135-00	CERAMIC CHIP 560PF	5% 50V
C215	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C324	1-124-910-11	ELECT 47MF	20% 50V
C216	1-163-809-11	CERAMIC CHIP 0.047MF	10% 25V	C325	1-216-295-91	METAL GLAZE 0 5% 1/10W	
C217	1-124-925-11	ELECT 2.2MF	20% 50V	C333	1-163-213-00	CERAMIC CHIP 0.0022MF	5% 50V
C218	1-124-925-11	ELECT 2.2MF	20% 50V	C341	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V
C219	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V	C342	1-163-077-00	CERAMIC CHIP 0.1MF	10% 25V
C220	1-163-011-11	CERAMIC CHIP 0.0015MF	10% 50V	C343	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C221	1-124-925-11	ELECT 2.2MF	20% 50V	C344	1-162-638-11	CERAMIC CHIP 1MF	16V
C222	1-124-925-11	ELECT 2.2MF	20% 50V	C345	1-162-638-11	CERAMIC CHIP 1MF	16V
C223	1-136-177-00	FILM 1MF	5% 50V	C347	1-162-638-11	CERAMIC CHIP 1MF	16V
C224	1-136-177-00	FILM 1MF	5% 50V	C348	1-162-638-11	CERAMIC CHIP 1MF	16V
C225	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V	C349	1-162-638-11	CERAMIC CHIP 1MF	16V
C226	1-163-007-11	CERAMIC CHIP 680PF	10% 50V	C350	1-124-907-11	ELECT 10MF	20% 50V
C227	1-124-907-11	ELECT 10MF	20% 50V	C351	1-126-101-11	ELECT 100MF	20% 16V
C228	1-124-907-11	ELECT 10MF	20% 50V	C352	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C229	1-126-101-11	ELECT 100MF	20% 16V	C353	1-162-638-11	CERAMIC CHIP 1MF	16V
C230	1-126-101-11	ELECT 100MF	20% 16V	C354	1-162-638-11	CERAMIC CHIP 1MF	16V
C231	1-164-346-11	CERAMIC CHIP 1MF	16V	C355	1-162-638-11	CERAMIC CHIP 1MF	16V
C232	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C356	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
C233	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V	C357	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
C234	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	C358	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
C235	1-130-772-00	FILM 0.22MF	5% 63V	C359	1-124-907-11	ELECT 10MF	20% 50V
C236	1-124-618-11	ELECT 2200MF	20% 35V	C361	1-163-101-00	CERAMIC CHIP 22PF	5% 50V
C237	1-124-618-11	ELECT 2200MF	20% 35V	C362	1-130-772-00	FILM 0.22MF	5% 63V
C238	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V	C363	1-124-907-11	ELECT 10MF	20% 50V
C239	1-130-772-00	FILM 0.22MF	5% 63V	C365	1-124-120-11	ELECT 220MF	20% 16V
C240	1-124-916-11	ELECT 22MF	20% 50V	C366	1-124-903-11	ELECT 1MF	20% 50V
C241	1-124-916-11	ELECT 22MF	20% 50V	C401	1-164-005-11	CERAMIC CHIP 0.47MF	16V
C242	1-124-903-11	ELECT 1MF	20% 50V	C402	1-124-917-11	ELECT 33MF	20% 50V
C244	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V	C403	1-164-005-11	CERAMIC CHIP 0.47MF	16V
C248	1-163-121-00	CERAMIC CHIP 150PF	5% 50V	C411	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C249	1-124-902-00	ELECT 0.47MF	20% 50V	C412	1-164-005-11	CERAMIC CHIP 0.47MF	25V
C250	1-163-129-00	CERAMIC CHIP 330PF	5% 50V	C421	1-124-910-11	ELECT 47MF	20% 50V
C251	1-126-320-11	ELECT 10MF	20% 16V	C422	1-124-910-11	ELECT 47MF	20% 50V
C254	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C423	1-106-367-00	MYLAR 0.01MF	10% 400V
C255	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C424	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C256	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C425	1-163-129-00	CERAMIC CHIP 330PF	5% 50V
C257	1-163-133-00	CERAMIC CHIP 470PF	5% 50V	C426	1-124-910-11	ELECT 47MF	20% 50V
C301	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C427	1-164-346-11	CERAMIC CHIP 1MF	16V
C302	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C428	1-164-346-11	CERAMIC CHIP 1MF	16V
C303	1-164-337-11	CERAMIC CHIP 2.2MF	16V	C429	1-124-119-00	ELECT 330MF	20% 16V

REF.NO.	PART NO.	DESCRIPTION	REMARK
C501	1-124-907-11	ELECT 10MF	20% 50V
C502	1-124-902-00	ELECT 0.47MF	20% 50V
C503	1-130-487-00	MYLAR 0.022MF	5% 50V
C504	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C505	1-136-598-11	FILM 3MF	5% 200V
C507	1-108-700-11	MYLAR 0.047MF	10% 200V
C508	1-102-973-00	CERAMIC 100PF	5% 50V
C509	1-102-030-00	CERAMIC 330PF	10% 500V
C510	1-136-565-11	FILM 0.015MF	3% 1.4KV
C514	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C515	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C517	1-124-907-11	ELECT 10MF	20% 50V
C518	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C520	1-124-916-11	ELECT 22MF	20% 50V
C522	1-123-024-21	ELECT 33MF	160V
C523	1-108-700-11	MYLAR 0.047MF	10% 200V
C524	1-124-477-11	ELECT 47MF	20% 16V
C525	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C526	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C528	1-124-662-11	ELECT 220MF	20% 50V
C529	1-126-320-11	ELECT 10MF	20% 16V
C530	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
C531	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
C532	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C536	1-124-662-11	ELECT 220MF	20% 50V
C537	1-124-662-11	ELECT 220MF	20% 50V
C539	1-124-907-11	ELECT 10MF	20% 50V
C542	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C543	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C544	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C545	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C557	1-102-030-00	CERAMIC 330PF	10% 500V
C569	1-123-935-00	ELECT 33MF	20% 160V
C574	1-163-117-00	CERAMIC CHIP 100PF	5% 50V
C575	1-164-299-11	CERAMIC CHIP 0.22MF	10% 25V
C576	1-163-075-00	CERAMIC CHIP 0.047MF	10% 25V
C577	1-163-093-00	CERAMIC CHIP 10PF	5% 50V
C578	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C579	1-124-910-11	ELECT 47MF	20% 50V
C580	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C581	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C582	1-124-916-11	ELECT 22MF	20% 50V
C583	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C585	1-163-009-11	CERAMIC CHIP 0.001MF	10% 50V
C586	1-163-063-00	CERAMIC CHIP 0.022MF	10% 50V
C587	1-124-903-11	ELECT 1MF	20% 50V
C588	1-164-346-11	CERAMIC CHIP 1MF	16V
C589	1-126-103-11	ELECT 470MF	20% 16V
C590	1-124-916-11	ELECT 22MF	20% 50V
C591	1-124-925-11	ELECT 2.2MF	20% 50V
C592	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C593	1-164-182-11	CERAMIC CHIP 0.0033MF	10% 50V
C595	1-163-109-00	CERAMIC CHIP 47PF	5% 50V
C599	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C680	1-128-526-11	ELECT 100MF	20% 25V
C682	1-126-101-11	ELECT 100MF	20% 16V
C684	1-126-101-11	ELECT 100MF	20% 16V
C685	1-124-122-11	ELECT 100MF	20% 50V
C686	1-124-916-11	ELECT 22MF	20% 50V
C687	1-124-916-11	ELECT 22MF	20% 50V

REF.NO.	PART NO.	DESCRIPTION	REMARK
< FILTER >			
CF581	1-577-611-11	OSCILATOR, CERAMIC	
< CONNECTOR >			
CN0001	*1-568-880-51	PIN, CONNECTOR 5P	
CN0101	1-695-297-11	CONNECTOR, BOARD TO BOARD 20P	
CN0103	1-695-297-11	CONNECTOR, BOARD TO BOARD 20P	
CN0104	*1-568-880-51	PIN, CONNECTOR 5P	
CN0105	*1-568-879-11	PIN, CONNECTOR 4P	
CN0108	*1-564-513-11	PLUG, CONNECTOR 10P	
CN0109	1-695-299-11	CONNECTOR, BOARD TO BOARD 50P	
CN0110	*1-568-882-51	PIN, CONNECTOR 7P	
CN0113	1-695-298-11	CONNECTOR, BOARD TO BOARD 40P	
CN0114	*1-568-879-11	PIN, CONNECTOR 4P	
CN0115	*1-564-516-11	PLUG, CONNECTOR 13P	
CN0116	*1-568-879-11	PIN, CONNECTOR 4P	
CN0119	*1-568-878-51	PIN, CONNECTOR 3P	
CN0120	*1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	
CN0121	*1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	
CN0122	*1-691-291-11	PIN, CONNECTOR (PC BOARD) 5P	
CN0123	*1-568-880-51	PIN, CONNECTOR 5P	
CN0124	*1-568-880-51	PIN, CONNECTOR 5P	
CN0125	*1-568-880-51	PIN, CONNECTOR 5P	
CN0126	*1-564-511-11	PLUG, CONNECTOR 8P	
CN0127	*1-564-512-11	PLUG, CONNECTOR 9P	
CN0128	*1-568-882-51	PIN, CONNECTOR 7P	
CN0129	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
CN0131	*1-568-879-11	PIN, CONNECTOR 4P	
CN0132	1-766-281-21	PIN, CONNECTOR (PC BOARD) 8P	
CN0133	*1-564-513-11	PLUG, CONNECTOR 10P	
CN0134	*1-568-880-51	PIN, CONNECTOR 5P	
CN0135	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN0161	1-695-915-11	TAB (CONTACT)	
< DIODE >			
D068	8-719-914-44	DIODE DAP202K	
D069	8-719-914-44	DIODE DAP202K	
D071	8-719-109-89	DIODE RD5.6ESB2	
D073	8-719-109-89	DIODE RD5.6ESB2	
D075	8-719-914-43	DIODE DAN202K	
D077	8-719-914-43	DIODE DAN202K	
D078	8-719-109-89	DIODE RD5.6ESB2	
D079	8-719-109-89	DIODE RD5.6ESB2	
D101	8-719-982-27	DIODE MTZJ-33C	
D206	8-719-914-43	DIODE DAN202K	
D207	8-719-921-89	DIODE MTZJ-13C	
D208	8-719-914-43	DIODE DAN202K	
D209	8-719-901-33	DIODE 1SS133	
D210	8-719-901-33	DIODE 1SS133	
D211	8-719-901-33	DIODE 1SS133	
D212	8-719-901-33	DIODE 1SS133	
D213	8-719-914-43	DIODE DAN202K	
D301	8-719-914-43	DIODE DAN202K	
D304	8-719-109-89	DIODE RD5.6ESB2	
D305	8-719-914-43	DIODE DAN202K	
D306	8-719-914-43	DIODE DAN202K	
D307	8-719-914-43	DIODE DAN202K	
D308	8-719-800-76	DIODE 1SS226	
D311	8-719-800-76	DIODE 1SS226	
D381	8-719-110-03	DIODE RD7.5ESB2	

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D401	8-719-110-14	DIODE RD9.1ESB3		L502	1-410-645-31	INDUCTOR 100UH	
D403	8-719-110-14	DIODE RD9.1ESB3		L505	1-459-313-00	COIL WITH CORE (HWC)	
D405	8-719-110-14	DIODE RD9.1ESB3		L507	1-459-313-00	COIL WITH CORE (HWC)	
D406	8-719-110-14	DIODE RD9.1ESB3		L575	1-408-397-00	INDUCTOR 1UH	
D407	8-719-110-14	DIODE RD9.1ESB3		L610	1-412-539-41	INDUCTOR 150UH	
D501	8-719-971-20	DIODE ERC38-06		L611	1-412-539-41	INDUCTOR 150UH	
D502	8-719-971-20	DIODE ERC38-06				< TRANSISTOR >	
D503	8-719-300-80	DIODE RU-1C		Q071	8-729-901-05	TRANSISTOR DTA124EK	
D504	8-719-109-89	DIODE RD5.6ESB2		Q101	8-729-216-22	TRANSISTOR 2SA1162-G	
D505	8-719-900-95	DIODE V09G		Q102	8-729-901-00	TRANSISTOR DTC124EK	
D506	8-719-900-95	DIODE V09G		Q103	8-729-900-53	TRANSISTOR DTC114EK	
D508	8-719-914-43	DIODE DAN202K		Q104	8-729-216-22	TRANSISTOR 2SA1162-G	
D510	8-719-914-43	DIODE DAN202K		Q105	8-729-900-53	TRANSISTOR DTC114EK	
D512	8-719-901-33	DIODE 1SS133		Q201	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D513	8-719-914-43	DIODE DAN202K		Q202	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D514	8-719-914-43	DIODE DAN202K		Q203	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D522	8-719-914-43	DIODE DAN202K		Q204	8-729-216-22	TRANSISTOR 2SA1162-G	
D523	8-719-914-43	DIODE DAN202K		Q205	8-729-216-22	TRANSISTOR 2SA1162-G	
D524	8-719-914-43	DIODE DAN202K		Q206	8-729-216-22	TRANSISTOR 2SA1162-G	
D525	8-719-914-43	DIODE DAN202K		Q207	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D526	8-719-914-43	DIODE DAN202K		Q209	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D555	8-719-914-43	DIODE DAN202K		Q210	8-729-920-74	TRANSISTOR 2SC2412K-QR	
D571	8-719-800-76	DIODE 1SS226		Q301	8-729-901-00	TRANSISTOR DTC124EK	
D615	8-719-921-88	DIODE MTZJ-13B		Q302	8-729-216-22	TRANSISTOR 2SA1162-G	
D616	8-719-921-88	DIODE MTZJ-13B		Q303	8-729-216-22	TRANSISTOR 2SA1162-G	
		< IC >		Q304	8-729-900-53	TRANSISTOR DTC114EK	
IC001	8-752-037-04	IC CX-7948A		Q305	8-729-901-01	TRANSISTOR DTC144EK	
IC005	8-752-058-71	IC CXA1656S		Q306	8-729-216-22	TRANSISTOR 2SA1162-G	
IC072	8-759-184-27	IC ST24C16CB1		Q308	8-729-216-22	TRANSISTOR 2SA1162-G	
IC201	8-759-266-64	IC TDA6612-5		Q309	8-729-931-02	TRANSISTOR 2SC2413KQ	
IC202	8-759-502-21	IC TDA2822M		Q310	8-729-901-00	TRANSISTOR DTC124EK	
IC251	8-759-072-99	IC TDA2052		Q311	8-729-901-06	TRANSISTOR DTA144EK	
	4-200-001-11	HOLDER, IC ; IC251		Q312	8-729-900-53	TRANSISTOR DTC114EK	
IC261	8-759-072-99	IC TDA2052		Q401	8-729-920-74	TRANSISTOR 2SC2412K-QR	
	4-200-001-11	HOLDER, IC ; IC261		Q402	8-729-920-74	TRANSISTOR 2SC2412K-QR	
IC301	8-759-189-90	IC TDA9145/N2B		Q403	8-729-920-74	TRANSISTOR 2SC2412K-QR	
IC302	8-759-084-91	IC TDA4661/V2		Q404	8-729-920-74	TRANSISTOR 2SC2412K-QR	
IC304	8-752-056-54	IC CXA1587S		Q501	8-729-119-80	TRANSISTOR 2SC2688-LK	
IC401	8-752-068-46	IC CXA1855S		Q502	8-729-016-32	TRANSISTOR 2SC4927-01	
IC402	8-759-073-00	IC TEA2114			4-382-854-11	SCREW (M3X10), P, SW (+) ; Q502	
IC502	8-752-057-18	IC CXA1315P		Q503	8-729-216-22	TRANSISTOR 2SA1162-G	
IC681	8-759-231-58	IC TA7812S		Q504	8-729-920-74	TRANSISTOR 2SC2412K-QR	
	4-382-854-11	SCREW (M3X10), P, SW (+) ; IC681		Q505	8-729-201-32	TRANSISTOR 2SA1013-0	
IC682	8-759-279-71	IC UPD6600AGS-B50		Q506	8-729-201-32	TRANSISTOR 2SA1013-0	
	4-382-854-11	SCREW (M3X10), P, SW (+) ; IC682		Q507	8-729-304-92	TRANSISTOR 2SB649A-C	
IC683	8-759-701-59	IC NJM78M09FA		Q508	8-729-204-16	TRANSISTOR 2SA1301-0	
	*4-389-343-11	SPRING, IC ; IC683			4-363-414-00	SPACER, MICA ; Q508	
		< IF BLOCK >			4-382-854-11	SCREW (M3X10), P, SW (+) ; Q508	
IFB101	1-467-573-11	IF BLOCK (IFH-389FX)		Q509	8-729-920-74	TRANSISTOR 2SC2412K-QR	
		< COIL >		Q510	8-729-920-74	TRANSISTOR 2SC2412K-QR	
L101	1-412-546-41	INDUCTOR 560UH		Q511	8-729-920-74	TRANSISTOR 2SC2412K-QR	
L102	1-408-413-00	INDUCTOR 22UH		Q515	8-729-216-22	TRANSISTOR 2SA1162-G	
L201	1-410-067-21	INDUCTOR 4.7MMH		Q516	8-729-216-22	TRANSISTOR 2SA1162-G	
L306	1-408-405-00	INDUCTOR 4.7UH		Q517	8-729-216-22	TRANSISTOR 2SA1162-G	
L307	1-408-405-00	INDUCTOR 4.7UH		Q518	8-729-920-74	TRANSISTOR 2SC2412K-QR	
L308	1-408-417-00	INDUCTOR 47UH		Q519	8-729-920-74	TRANSISTOR 2SC2412K-QR	
L501	1-460-196-11	COIL, HORIZONTAL LINEARITY		Q520	8-729-920-74	TRANSISTOR 2SC2412K-QR	
				Q521	8-729-920-74	TRANSISTOR 2SC2412K-QR	
				Q522	8-729-920-74	TRANSISTOR 2SC2412K-QR	

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q524	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR62	1-216-295-91	METAL GLAZE 0	5% 1/10W
Q525	8-729-901-00	TRANSISTOR DTC124EK		JR63	1-216-296-00	METAL GLAZE 0	5% 1/8W
Q581	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR64	1-216-296-00	METAL GLAZE 0	5% 1/8W
Q582	8-729-216-22	TRANSISTOR 2SA1162-G		JR65	1-216-296-00	METAL GLAZE 0	5% 1/8W
Q599	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR66	1-216-296-00	METAL GLAZE 0	5% 1/8W
Q611	8-729-900-53	TRANSISTOR DTC114EK		JR67	1-216-296-00	METAL GLAZE 0	5% 1/8W
< RESISTOR >				JR68	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR1	1-216-296-00	METAL GLAZE 0	5% 1/8W	JR69	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR2	1-216-296-00	METAL GLAZE 0	5% 1/8W	JR70	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR3	1-216-295-91	METAL GLAZE 0	5% 1/10W	JR71	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR4	1-216-296-00	METAL GLAZE 0	5% 1/8W	JR72	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR5	1-216-296-00	METAL GLAZE 0	5% 1/8W	JR74	1-216-295-91	METAL GLAZE 0	5% 1/10W
JR6	1-216-296-00	METAL GLAZE 0	5% 1/8W	JR75	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR7	1-216-295-91	METAL GLAZE 0	5% 1/10W	JR76	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR8	1-216-296-00	METAL GLAZE 0	5% 1/8W	JR77	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR9	1-216-295-91	METAL GLAZE 0	5% 1/10W	JR78	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR10	1-216-295-91	METAL GLAZE 0	5% 1/10W	JR80	1-216-295-91	METAL GLAZE 0	5% 1/10W
JR11	1-216-296-00	METAL GLAZE 0	5% 1/8W	JR81	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR12	1-216-296-00	METAL GLAZE 0	5% 1/8W	JR82	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR13	1-216-296-00	METAL GLAZE 0	5% 1/8W	JR83	1-216-296-00	METAL GLAZE 0	5% 1/8W
JR14	1-216-296-00	METAL GLAZE 0	5% 1/8W	JR87	1-216-295-91	METAL GLAZE 0	5% 1/10W
JR15	1-216-296-00	METAL GLAZE 0	5% 1/8W	JR100	1-216-073-00	METAL GLAZE 10K	5% 1/10W
JR16	1-216-296-00	METAL GLAZE 0	5% 1/8W	JR103	1-216-295-91	METAL GLAZE 0	5% 1/10W
JR17	1-216-295-91	METAL GLAZE 0	5% 1/10W	JR110	1-216-295-91	METAL GLAZE 0	5% 1/10W
JR18	1-216-295-91	METAL GLAZE 0	5% 1/10W	JR130	1-216-295-91	METAL GLAZE 0	5% 1/10W
JR19	1-216-295-91	METAL GLAZE 0	5% 1/10W	JR234	1-216-295-91	METAL GLAZE 0	5% 1/10W
JR21	1-216-296-00	METAL GLAZE 0	5% 1/8W	JR403	1-216-295-91	METAL GLAZE 0	5% 1/10W
JR22	1-216-295-91	METAL GLAZE 0	5% 1/10W	R001	1-216-341-11	METAL OXIDE 0.22	5% 1W F
JR23	1-216-295-91	METAL GLAZE 0	5% 1/10W	R071	1-216-041-00	METAL GLAZE 470	5% 1/10W
JR24	1-216-295-91	METAL GLAZE 0	5% 1/10W	R072	1-216-033-00	METAL GLAZE 220	5% 1/10W
JR25	1-216-296-00	METAL GLAZE 0	5% 1/8W	R073	1-216-033-00	METAL GLAZE 220	5% 1/10W
JR26	1-216-295-91	METAL GLAZE 0	5% 1/10W	R074	1-216-198-91	METAL GLAZE 1K	5% 1/8W
JR27	1-216-295-91	METAL GLAZE 0	5% 1/10W	R076	1-216-057-00	METAL GLAZE 2.2K	5% 1/10W
JR28	1-216-295-91	METAL GLAZE 0	5% 1/10W	R077	1-216-025-00	METAL GLAZE 100	5% 1/10W
JR29	1-216-295-91	METAL GLAZE 0	5% 1/10W	R100	1-216-097-00	METAL GLAZE 100K	5% 1/10W
JR30	1-216-295-91	METAL GLAZE 0	5% 1/10W	R101	1-216-025-00	METAL GLAZE 100	5% 1/10W
JR31	1-216-295-91	METAL GLAZE 0	5% 1/10W	R102	1-216-049-00	METAL GLAZE 1K	5% 1/10W
JR32	1-216-295-91	METAL GLAZE 0	5% 1/10W	R104	1-216-073-00	METAL GLAZE 10K	5% 1/10W
JR33	1-216-295-91	METAL GLAZE 0	5% 1/10W	R105	1-216-073-00	METAL GLAZE 10K	5% 1/10W
JR34	1-216-296-00	METAL GLAZE 0	5% 1/8W	R106	1-216-073-00	METAL GLAZE 10K	5% 1/10W
JR35	1-216-296-00	METAL GLAZE 0	5% 1/8W	R107	1-216-061-00	METAL GLAZE 3.3K	5% 1/10W
JR36	1-216-295-91	METAL GLAZE 0	5% 1/10W	R108	1-216-230-00	METAL GLAZE 22K	5% 1/8W
JR37	1-216-296-00	METAL GLAZE 0	5% 1/8W	R115	1-216-210-00	METAL GLAZE 3.3K	5% 1/8W
JR38	1-216-296-00	METAL GLAZE 0	5% 1/8W	R201	1-208-784-11	METAL CHIP 1.2K	0.50% 1/10W
JR39	1-216-295-91	METAL GLAZE 0	5% 1/10W	R202	1-208-784-11	METAL CHIP 1.2K	0.50% 1/10W
JR40	1-216-295-91	METAL GLAZE 0	5% 1/10W	R203	1-216-067-00	METAL GLAZE 5.6K	5% 1/10W
JR41	1-216-296-00	METAL GLAZE 0	5% 1/8W	R204	1-216-091-00	METAL GLAZE 56K	5% 1/10W
JR42	1-216-296-00	METAL GLAZE 0	5% 1/8W	R205	1-216-295-91	METAL GLAZE 0	5% 1/10W
JR43	1-216-296-00	METAL GLAZE 0	5% 1/8W	R206	1-216-295-91	METAL GLAZE 0	5% 1/10W
JR44	1-216-296-00	METAL GLAZE 0	5% 1/8W	R207	1-216-073-00	METAL GLAZE 10K	5% 1/10W
JR47	1-216-296-00	METAL GLAZE 0	5% 1/8W	R208	1-216-073-00	METAL GLAZE 10K	5% 1/10W
JR48	1-216-295-91	METAL GLAZE 0	5% 1/10W	R209	1-249-377-11	CARBON 0.47	5% 1/4W F
JR54	1-216-296-00	METAL GLAZE 0	5% 1/8W	R210	1-247-739-11	CARBON 100	5% 1/2W
JR55	1-216-296-00	METAL GLAZE 0	5% 1/8W	R211	1-247-739-11	CARBON 100	5% 1/2W
JR56	1-216-296-00	METAL GLAZE 0	5% 1/8W	R212	1-216-049-00	METAL GLAZE 1K	5% 1/10W
JR57	1-216-295-91	METAL GLAZE 0	5% 1/10W	R213	1-216-073-00	METAL GLAZE 10K	5% 1/10W
JR58	1-216-295-91	METAL GLAZE 0	5% 1/10W	R214	1-216-049-00	METAL GLAZE 1K	5% 1/10W
JR60	1-216-296-00	METAL GLAZE 0	5% 1/8W	R215	1-216-073-00	METAL GLAZE 10K	5% 1/10W
JR61	1-216-296-00	METAL GLAZE 0	5% 1/8W	R216	1-216-049-00	METAL GLAZE 1K	5% 1/10W
				R217	1-216-043-91	METAL GLAZE 560	5% 1/10W

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R218	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R321	1-216-039-00	METAL GLAZE	390 5% 1/10W
R221	1-212-849-00	FUSIBLE	4.7 5% 1/4W F	R322	1-216-041-00	METAL GLAZE	470 5% 1/10W
R222	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R324	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R223	1-216-043-91	METAL GLAZE	560 5% 1/10W	R325	1-216-047-00	METAL GLAZE	820 5% 1/10W
R224	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R326	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R225	1-212-849-00	FUSIBLE	4.7 5% 1/4W F	R328	1-216-029-00	METAL GLAZE	150 5% 1/10W
R226	1-216-039-00	METAL GLAZE	390 5% 1/10W	R329	1-216-023-00	METAL GLAZE	82 5% 1/10W
R227	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R330	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R228	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R331	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R229	1-216-039-00	METAL GLAZE	390 5% 1/10W	R333	1-216-182-00	METAL GLAZE	220 5% 1/8W
R230	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R334	1-216-182-00	METAL GLAZE	220 5% 1/8W
R231	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R335	1-216-025-00	METAL GLAZE	100 5% 1/10W
R232	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R336	1-216-295-91	METAL GLAZE	0 5% 1/10W
R233	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W	R337	1-216-295-91	METAL GLAZE	0 5% 1/10W
R234	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R338	1-216-295-91	METAL GLAZE	0 5% 1/10W
R235	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R339	1-216-025-00	METAL GLAZE	100 5% 1/10W
R236	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R340	1-216-025-00	METAL GLAZE	100 5% 1/10W
R237	1-216-025-00	METAL GLAZE	100 5% 1/10W	R341	1-216-025-00	METAL GLAZE	100 5% 1/10W
R238	1-216-025-00	METAL GLAZE	100 5% 1/10W	R342	1-216-033-00	METAL GLAZE	220 5% 1/10W
R239	1-216-295-91	METAL GLAZE	0 5% 1/10W	R343	1-216-022-00	METAL GLAZE	75 5% 1/10W
R241	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R344	1-216-022-00	METAL GLAZE	75 5% 1/10W
R242	1-216-214-00	METAL GLAZE	4.7K 5% 1/8W	R345	1-216-022-00	METAL GLAZE	75 5% 1/10W
R244	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W	R346	1-216-022-00	METAL GLAZE	75 5% 1/10W
R245	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R347	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R246	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R351	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R247	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R352	1-216-033-00	METAL GLAZE	220 5% 1/10W
R248	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R354	1-216-033-00	METAL GLAZE	220 5% 1/10W
R249	1-216-045-00	METAL GLAZE	680 5% 1/10W	R355	1-216-033-00	METAL GLAZE	220 5% 1/10W
R250	1-216-095-00	METAL GLAZE	82K 5% 1/10W	R356	1-216-033-00	METAL GLAZE	220 5% 1/10W
R251	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R357	1-216-041-00	METAL GLAZE	470 5% 1/10W
R252	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R358	1-216-031-00	METAL GLAZE	180 5% 1/10W
R253	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R359	1-216-033-00	METAL GLAZE	220 5% 1/10W
R254	1-216-252-00	METAL GLAZE	180K 5% 1/8W	R360	1-216-033-00	METAL GLAZE	220 5% 1/10W
R255	1-216-252-00	METAL GLAZE	180K 5% 1/8W	R361	1-216-033-00	METAL GLAZE	220 5% 1/10W
R256	1-216-182-00	METAL GLAZE	220 5% 1/8W	R362	1-216-077-00	METAL GLAZE	15K 5% 1/10W
R257	1-216-182-00	METAL GLAZE	220 5% 1/8W	R365	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R258	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R366	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R259	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R367	1-216-296-00	METAL GLAZE	0 5% 1/8W
R260	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R368	1-216-033-00	METAL GLAZE	220 5% 1/10W
R300	1-216-009-00	METAL GLAZE	22 5% 1/10W	R369	1-216-033-00	METAL GLAZE	220 5% 1/10W
R301	1-216-041-00	METAL GLAZE	470 5% 1/10W	R370	1-216-033-00	METAL GLAZE	220 5% 1/10W
R302	1-216-190-00	METAL GLAZE	470 5% 1/8W	R371	1-216-033-00	METAL GLAZE	220 5% 1/10W
R303	1-216-174-00	METAL GLAZE	100 5% 1/8W	R373	1-216-017-00	METAL GLAZE	47 5% 1/10W
R304	1-216-174-00	METAL GLAZE	100 5% 1/8W	R374	1-216-041-00	METAL GLAZE	470 5% 1/10W
R305	1-216-035-00	METAL GLAZE	270 5% 1/10W	R376	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R306	1-216-035-00	METAL GLAZE	270 5% 1/10W	R377	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R307	1-216-075-00	METAL GLAZE	12K 5% 1/10W	R378	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R308	1-216-121-00	METAL GLAZE	1M 5% 1/10W	R379	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R309	1-216-001-00	METAL GLAZE	10 5% 1/10W	R380	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R310	1-216-001-00	METAL GLAZE	10 5% 1/10W	R381	1-216-164-00	METAL GLAZE	39 5% 1/8W
R311	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R382	1-216-164-00	METAL GLAZE	39 5% 1/8W
R312	1-216-041-00	METAL GLAZE	470 5% 1/10W	R383	1-216-164-00	METAL GLAZE	39 5% 1/8W
R313	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R401	1-216-171-00	METAL GLAZE	75 5% 1/8W
R314	1-216-033-00	METAL GLAZE	220 5% 1/10W	R402	1-216-158-00	METAL GLAZE	22 5% 1/8W
R315	1-216-033-00	METAL GLAZE	220 5% 1/10W	R403	1-216-025-00	METAL GLAZE	100 5% 1/10W
R316	1-216-085-00	METAL GLAZE	33K 5% 1/10W	R404	1-216-158-00	METAL GLAZE	22 5% 1/8W
R317	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R405	1-216-025-00	METAL GLAZE	100 5% 1/10W
R318	1-216-041-00	METAL GLAZE	470 5% 1/10W	R406	1-216-158-00	METAL GLAZE	22 5% 1/8W
R319	1-216-041-00	METAL GLAZE	470 5% 1/10W	R407	1-216-025-00	METAL GLAZE	100 5% 1/10W
R320	1-216-174-00	METAL GLAZE	100 5% 1/8W	R408	1-216-093-00	METAL GLAZE	68K 5% 1/10W

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R410	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R552	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R411	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R553	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W
R412	1-216-171-00	METAL GLAZE	75 5% 1/8W	R554	1-216-121-00	METAL GLAZE	1M 5% 1/10W
R413	1-216-171-00	METAL GLAZE	75 5% 1/8W	R555	1-249-421-11	CARBON	2.2K 5% 1/4W F
R414	1-216-171-00	METAL GLAZE	75 5% 1/8W	R556	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R416	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R558	1-249-385-11	CARBON	2.2 5% 1/4W F
R417	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	R563	1-216-097-00	METAL GLAZE	100K 5% 1/10W
R419	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R564	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R420	1-216-063-00	METAL GLAZE	3.9K 5% 1/10W	R565	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R423	1-216-015-00	METAL GLAZE	39 5% 1/10W	R566	1-216-045-00	METAL GLAZE	680 5% 1/10W
R424	1-216-025-00	METAL GLAZE	100 5% 1/10W	R567	1-216-045-00	METAL GLAZE	680 5% 1/10W
R425	1-216-025-00	METAL GLAZE	100 5% 1/10W	R568	1-216-045-00	METAL GLAZE	680 5% 1/10W
R426	1-216-025-00	METAL GLAZE	100 5% 1/10W	R569	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R427	1-216-025-00	METAL GLAZE	100 5% 1/10W	R570	1-216-009-00	METAL GLAZE	22 5% 1/10W
R428	1-249-393-11	CARBON	10 5% 1/4W F	R571	1-216-009-00	METAL GLAZE	22 5% 1/10W
R470	1-216-113-00	METAL GLAZE	470K 5% 1/10W	R572	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R501	1-247-895-00	CARBON	470K 5% 1/4W	R573	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R502	1-249-377-11	CARBON	0.47 5% 1/4W F	R574	1-216-041-00	METAL GLAZE	470 5% 1/10W
R503	1-249-377-11	CARBON	0.47 5% 1/4W F	R575	1-216-186-00	METAL GLAZE	330 5% 1/8W
R504	1-249-417-11	CARBON	1K 5% 1/4W	R576	1-216-025-00	METAL GLAZE	100 5% 1/10W
R505	1-249-419-11	CARBON	1.5K 5% 1/4W	R577	1-216-025-00	METAL GLAZE	100 5% 1/10W
R506	1-215-920-11	METAL OXIDE	3.3K 5% 3W F	R579	1-216-069-00	METAL GLAZE	6.8K 5% 1/10W
R507	1-249-429-11	CARBON	10K 5% 1/4W F	R580	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R508	1-216-372-11	METAL OXIDE	1.8 5% 2W F	R581	1-216-033-00	METAL GLAZE	220 5% 1/10W
R509	1-216-478-11	METAL OXIDE	390 5% 3W F	R582	1-216-037-00	METAL GLAZE	330 5% 1/10W
R510	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R583	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R511	1-247-811-31	CARBON	150 5% 1/4W	R584	1-216-039-00	METAL GLAZE	390 5% 1/10W
R513	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R585	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R514	1-215-877-11	METAL OXIDE	22K 5% 1W F	R586	1-216-047-00	METAL GLAZE	820 5% 1/10W
R515	1-249-430-11	CARBON	12K 5% 1/4W F	R587	1-216-047-00	METAL GLAZE	820 5% 1/10W
R516	1-249-417-11	CARBON	1K 5% 1/4W	R588	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R517	1-249-426-11	CARBON	5.6K 5% 1/4W F	R589	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R518	1-249-425-11	CARBON	4.7K 5% 1/4W F	R590	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R519	1-249-417-11	CARBON	1K 5% 1/4W F	R591	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R520	1-215-925-11	METAL OXIDE	22K 5% 3W F	R592	1-216-083-00	METAL GLAZE	27K 5% 1/10W
R521	1-215-877-11	METAL OXIDE	22K 5% 1W F	R593	1-216-071-00	METAL GLAZE	8.2K 5% 1/10W
R522	1-216-057-00	METAL GLAZE	2.2K 5% 1/10W	R594	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R523	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R595	1-208-774-11	METAL CHIP	470 0.50% 1/10W
R524	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R596	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R525	1-216-097-00	METAL GLAZE	100K 5% 1/10W	R597	1-216-230-00	METAL GLAZE	22K 5% 1/8W
R526	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R598	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R527	1-249-429-11	CARBON	10K 5% 1/4W	R600	1-216-174-00	METAL GLAZE	100 5% 1/8W
R528	1-216-059-00	METAL GLAZE	2.7K 5% 1/10W	R606	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R531	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R609	1-216-689-11	METAL GLAZE	39K 5% 1/10W
R532	1-249-385-11	CARBON	2.2 5% 1/4W F	R610	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R533	1-216-033-00	METAL GLAZE	220 5% 1/10W	R611	1-216-295-91	METAL GLAZE	0 5% 1/10W
R536	1-216-476-11	METAL OXIDE	180 5% 3W F	R613	1-216-049-00	METAL GLAZE	1K 5% 1/10W
R537	1-216-476-11	METAL OXIDE	180 5% 3W F	R614	1-216-399-00	METAL OXIDE	6.8 5% 3W F
R540	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R618	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W
R541	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R620	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R542	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R621	1-216-399-00	METAL OXIDE	6.8 5% 3W F
R543	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R624	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R544	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R625	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R545	1-216-049-00	METAL GLAZE	1K 5% 1/10W	R626	1-216-033-00	METAL GLAZE	220 5% 1/10W
R546	1-216-083-00	METAL GLAZE	27K 5% 1/10W	R627	1-216-033-00	METAL GLAZE	220 5% 1/10W
R547	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W	R628	1-215-866-11	METAL OXIDE	330 5% 1W F
R548	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R629	1-216-488-11	METAL OXIDE	18K 5% 3W F
R549	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R631	1-216-055-00	METAL GLAZE	1.8K 5% 1/10W
R550	1-249-385-11	CARBON	2.2 5% 1/4W F	R632	1-216-051-00	METAL GLAZE	1.2K 5% 1/10W
R551	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R636	1-216-025-00	METAL GLAZE	100 5% 1/10W



REF.NO.	PART NO.	DESCRIPTION	REMARK		
R638	1-216-009-00	METAL GLAZE	22	5%	1/10W
R640	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R641	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R642	1-216-295-91	METAL GLAZE	0	5%	1/10W
R643	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R644	1-215-912-11	METAL OXIDE	150	5%	3W F
R645	1-215-912-11	METAL OXIDE	150	5%	3W F
R646	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R650	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R651	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R655	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R656	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R657	1-216-238-91	METAL GLAZE	47K	5%	1/8W
R1520	1-249-429-11	CARBON	10K	5%	1/4W
R2219	1-216-174-00	METAL GLAZE	100	5%	1/8W
R2220	1-216-174-00	METAL GLAZE	100	5%	1/8W
R2221	1-216-174-00	METAL GLAZE	100	5%	1/8W
R2222	1-216-174-00	METAL GLAZE	100	5%	1/8W
< TRANSFORMER >					
T501	1-439-545-11	TRANSFORMER, FERRITE			
T502	1-437-078-00	TRANSFORMER, HORIZONTAL DRIVE			
< TUNER >					
TU101	1-693-185-11	TUNER (UV916H)			
< CRYSTAL >					
X302	1-760-331-11	VIBRATOR, CRYSTAL			
X501	1-577-099-11	VIBRATOR, CERAMIC			

	1-467-573-11	IF BLOCK (IFH-389FX)			

< CAPACITOR >					
C101	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C102	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C104	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C111	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C112	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C113	1-164-489-11	CERAMIC CHIP	0.22MF	10%	16V
C114	1-124-925-11	ELECT	2.2MF	20%	50V
C115	1-124-916-11	ELECT	22MF	20%	50V
C116	1-124-916-11	ELECT	22MF	20%	50V
C117	1-163-090-00	CERAMIC CHIP	7PF	0.25PF	50V
C120	1-124-925-11	ELECT	2.2MF	20%	50V
C121	1-124-925-11	ELECT	2.2MF	20%	50V
C122	1-164-489-11	CERAMIC CHIP	0.22MF	10%	16V
C123	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C126	1-163-085-00	CERAMIC CHIP	2PF	0.25PF	50V
C128	1-164-489-11	CERAMIC CHIP	0.22MF	10%	16V
C131	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C132	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C133	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C134	1-163-239-11	CERAMIC CHIP	33PF	5%	50V
C135	1-124-477-11	ELECT	47MF	20%	16V
C141	1-163-249-11	CERAMIC CHIP	82PF	5%	50V
C143	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C145	1-124-477-11	ELECT	47MF	20%	16V

REF.NO.	PART NO.	DESCRIPTION	REMARK
C151	1-124-477-11	ELECT 47MF	20% 16V
C152	1-124-477-11	ELECT 47MF	20% 16V
C161	1-124-477-11	ELECT 47MF	20% 16V
C162	1-124-477-11	ELECT 47MF	20% 16V
C173	1-163-017-00	CERAMIC CHIP 0.0047MF	10% 50V
C174	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V
C175	1-163-227-11	CERAMIC CHIP 10PF	0.5PF 50V
C177	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C191	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C201	1-164-346-11	CERAMIC CHIP 1MF	16V
C202	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C203	1-124-477-11	ELECT 47MF	20% 16V
C204	1-164-346-11	CERAMIC CHIP 1MF	16V
C205	1-164-161-11	CERAMIC CHIP 0.0022MF	10% 50V
C206	1-163-251-11	CERAMIC CHIP 100PF	5% 50V
C207	1-164-222-11	CERAMIC CHIP 0.22MF	25V
C208	1-163-141-00	CERAMIC CHIP 0.001MF	5% 50V
C302	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C502	1-124-477-11	ELECT 47MF	20% 16V
C503	1-164-232-11	CERAMIC CHIP 0.01MF	10% 50V
C901	1-124-477-11	ELECT 47MF	20% 16V
C902	1-163-059-91	CERAMIC CHIP 0.01MF	10% 50V
< FILTER >			
CF171	1-567-100-00	FILTER, CERAMIC	
CF172	1-567-101-11	FILTER, CERAMIC	
CF173	1-760-107-21	FILTER, CERAMIC	
CF174	1-760-106-21	FILTER, CERAMIC	
SWF101	1-579-273-11	FILTER, SURFACE WAVE	
SWF103	1-760-244-21	FILTER, SURFACE WAVE	
< CONNECTOR >			
CN1	1-750-919-11	PIN, CONNECTOR (PC BOARD)	10P
CN2	1-750-919-11	PIN, CONNECTOR (PC BOARD)	10P
< TRIMMER >			
CT101	1-760-154-21	TRAP, CERAMIC	
CT131	1-409-430-11	TRAP, CERAMIC	
< DIODE >			
D101	8-719-914-43	DIODE DAN202K	
D171	8-719-914-43	DIODE DAN202K	
D201	8-719-914-43	DIODE DAN202K	
< IC >			
IC1	8-759-193-13	IC TDA9815	
IC2	8-759-514-54	IC BA7046	
IC3	8-752-069-79	IC CXA1875M	
IC4	8-759-710-86	IC NJM2233BM	
< COIL >			
L101	1-408-419-00	INDUCTOR	68UH
L102	1-410-985-11	INDUCTOR CHIP	0.22UH
L131	1-408-407-00	INDUCTOR	6.8UH
L132	1-410-426-21	INDUCTOR	39UH
L142	1-408-409-00	INDUCTOR	10UH
L171	1-408-609-41	INDUCTOR	33UH
L201	1-408-419-00	INDUCTOR	68UH
L501	1-408-411-00	INDUCTOR	15UH

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
L901	1-408-411-00	INDUCTOR 15UH		JR137	1-216-296-91	METAL GLAZE 0 5% 1/8W	
< TRANSISTOR >				JR138	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q101	8-729-104-80	TRANSISTOR 2SC3355		JR140	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q102	8-729-901-01	TRANSISTOR DTC144EK		JR141	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q104	8-729-901-01	TRANSISTOR DTC144EK		JR142	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q121	8-729-216-22	TRANSISTOR 2SA1162-G		JR143	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q131	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR145	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q132	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR146	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q141	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR150	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q142	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR152	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q151	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR154	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q152	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR160	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q153	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR161	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q154	8-729-901-01	TRANSISTOR DTC144EK		JR162	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q161	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR166	1-216-295-91	METAL GLAZE 0 5% 1/10W	
Q162	8-729-920-74	TRANSISTOR 2SC2412K-QR		JR167	1-216-296-91	METAL GLAZE 0 5% 1/8W	
Q171	8-729-216-22	TRANSISTOR 2SA1162-G		R100	1-216-025-00	METAL GLAZE 100 5% 1/10W	
Q174	8-729-901-01	TRANSISTOR DTC144EK		R102	1-216-059-00	METAL GLAZE 2.7K 5% 1/10W	
Q175	8-729-901-01	TRANSISTOR DTC144EK		R103	1-216-001-00	METAL GLAZE 10 5% 1/10W	
Q176	8-729-901-01	TRANSISTOR DTC144EK		R104	1-216-176-11	METAL GLAZE 120 5% 1/8W	
Q181	8-729-920-74	TRANSISTOR 2SC2412K-QR		R105	1-216-017-00	METAL GLAZE 47 5% 1/10W	
Q191	8-729-216-22	TRANSISTOR 2SA1162-G		R106	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
Q201	8-729-216-22	TRANSISTOR 2SA1162-G		R107	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
< RESISTOR >				R109	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
JR101	1-216-295-91	METAL GLAZE 0 5% 1/10W		R111	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR102	1-216-296-91	METAL GLAZE 0 5% 1/8W		R113	1-216-031-00	METAL GLAZE 180 5% 1/10W	
JR103	1-216-296-91	METAL GLAZE 0 5% 1/8W		R114	1-216-035-00	METAL GLAZE 270 5% 1/10W	
JR104	1-216-295-91	METAL GLAZE 0 5% 1/10W		R115	1-216-035-00	METAL GLAZE 270 5% 1/10W	
JR106	1-216-296-91	METAL GLAZE 0 5% 1/8W		R116	1-216-025-00	METAL GLAZE 100 5% 1/10W	
JR107	1-216-295-91	METAL GLAZE 0 5% 1/10W		R117	1-216-031-00	METAL GLAZE 180 5% 1/10W	
JR109	1-216-295-91	METAL GLAZE 0 5% 1/10W		R118	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
JR110	1-216-295-91	METAL GLAZE 0 5% 1/10W		R120	1-216-180-00	METAL GLAZE 180 5% 1/8W	
JR111	1-216-296-91	METAL GLAZE 0 5% 1/8W		R131	1-216-198-91	METAL GLAZE 1K 5% 1/8W	
JR112	1-216-295-91	METAL GLAZE 0 5% 1/10W		R133	1-216-031-00	METAL GLAZE 180 5% 1/10W	
JR113	1-216-296-91	METAL GLAZE 0 5% 1/8W		R134	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
JR114	1-216-295-91	METAL GLAZE 0 5% 1/10W		R135	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR115	1-216-295-91	METAL GLAZE 0 5% 1/10W		R136	1-216-041-00	METAL GLAZE 470 5% 1/10W	
JR116	1-216-296-91	METAL GLAZE 0 5% 1/8W		R137	1-216-041-00	METAL GLAZE 470 5% 1/10W	
JR117	1-216-296-91	METAL GLAZE 0 5% 1/8W		R138	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
JR118	1-216-296-91	METAL GLAZE 0 5% 1/8W		R139	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
JR119	1-216-296-91	METAL GLAZE 0 5% 1/8W		R140	1-216-295-91	METAL GLAZE 0 5% 1/10W	
JR120	1-216-295-91	METAL GLAZE 0 5% 1/10W		R142	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
JR121	1-216-296-91	METAL GLAZE 0 5% 1/8W		R144	1-216-041-00	METAL GLAZE 470 5% 1/10W	
JR122	1-216-296-91	METAL GLAZE 0 5% 1/8W		R145	1-216-041-00	METAL GLAZE 470 5% 1/10W	
JR123	1-216-296-91	METAL GLAZE 0 5% 1/8W		R146	1-216-043-00	METAL GLAZE 560 5% 1/10W	
JR124	1-216-296-91	METAL GLAZE 0 5% 1/8W		R147	1-216-025-00	METAL GLAZE 100 5% 1/10W	
JR125	1-216-295-91	METAL GLAZE 0 5% 1/10W		R148	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
JR126	1-216-295-91	METAL GLAZE 0 5% 1/10W		R149	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
JR127	1-216-296-91	METAL GLAZE 0 5% 1/8W		R151	1-216-226-00	METAL GLAZE 15K 5% 1/8W	
JR128	1-216-295-91	METAL GLAZE 0 5% 1/10W		R152	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
JR129	1-216-295-91	METAL GLAZE 0 5% 1/10W		R153	1-216-689-11	METAL GLAZE 39K 5% 1/10W	
JR130	1-216-296-91	METAL GLAZE 0 5% 1/8W		R154	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
JR131	1-216-296-91	METAL GLAZE 0 5% 1/8W		R155	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
JR132	1-216-296-91	METAL GLAZE 0 5% 1/8W		R156	1-216-037-00	METAL GLAZE 330 5% 1/10W	
JR133	1-216-296-91	METAL GLAZE 0 5% 1/8W		R161	1-216-079-00	METAL GLAZE 18K 5% 1/10W	
JR134	1-216-295-91	METAL GLAZE 0 5% 1/10W		R162	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
JR135	1-216-296-91	METAL GLAZE 0 5% 1/8W		R163	1-216-689-11	METAL GLAZE 39K 5% 1/10W	
JR136	1-216-295-91	METAL GLAZE 0 5% 1/10W		R164	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
				R165	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
				R166	1-216-037-00	METAL GLAZE 330 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION	REMARK		
R167	1-216-073-00	METAL GLAZE 10K 5%	1/10W		
R168	1-216-212-00	METAL GLAZE 3.9K 5%	1/8W		
R169	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W		
R171	1-216-045-00	METAL GLAZE 680 5%	1/10W		
R177	1-216-025-00	METAL GLAZE 100 5%	1/10W		
R178	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W		
R179	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W		
R180	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W		
R181	1-216-041-00	METAL GLAZE 470 5%	1/10W		
R182	1-216-041-00	METAL GLAZE 470 5%	1/10W		
R183	1-216-192-00	METAL GLAZE 560 5%	1/8W		
R184	1-216-043-00	METAL GLAZE 560 5%	1/10W		
R185	1-216-067-00	METAL GLAZE 5.6K 5%	1/10W		
R191	1-216-093-00	METAL GLAZE 68K 5%	1/10W		
R192	1-216-093-00	METAL GLAZE 68K 5%	1/10W		
R193	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W		
R194	1-216-049-00	METAL GLAZE 1K 5%	1/10W		
R195	1-216-216-00	METAL GLAZE 5.6K 5%	1/8W		
R201	1-216-198-91	METAL GLAZE 1K 5%	1/8W		
R202	1-216-107-00	METAL GLAZE 270K 5%	1/10W		
R203	1-216-073-00	METAL GLAZE 10K 5%	1/10W		
R204	1-216-113-00	METAL GLAZE 470K 5%	1/10W		
R205	1-218-755-11	METAL CHIP 130K 0.50%	1/10W		
R206	1-216-049-00	METAL GLAZE 1K 5%	1/10W		
R207	1-216-113-00	METAL GLAZE 470K 5%	1/10W		
R208	1-216-113-00	METAL GLAZE 470K 5%	1/10W		
R209	1-216-049-00	METAL GLAZE 1K 5%	1/10W		
R210	1-216-081-00	METAL GLAZE 22K 5%	1/10W		
R211	1-216-073-00	METAL GLAZE 10K 5%	1/10W		
R301	1-216-073-00	METAL GLAZE 10K 5%	1/10W		
R302	1-216-073-00	METAL GLAZE 10K 5%	1/10W		
R303	1-216-049-00	METAL GLAZE 1K 5%	1/10W		
R306	1-216-049-00	METAL GLAZE 1K 5%	1/10W		
R308	1-216-073-00	METAL GLAZE 10K 5%	1/10W		
R309	1-216-025-00	METAL GLAZE 100 5%	1/10W		
R310	1-216-025-00	METAL GLAZE 100 5%	1/10W		
< VARIABLE RESISTOR >					
RV111	1-241-786-11	RES, ADJ, CARBON 22K			
RV112	1-241-765-11	RES, ADJ, CARBON 22K			
< TRANSFORMER >					
T111	1-403-686-22	COIL			

*A-1635-029-A M2 BOARD, COMPLETE					

< CAPACITOR >					
C001	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C004	1-164-222-11	CERAMIC CHIP 0.22MF		25V	
C007	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C008	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C010	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C011	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C012	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C014	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	
C016	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V	
C017	1-164-222-11	CERAMIC CHIP 0.22MF		25V	

REF.NO.	PART NO.	DESCRIPTION	REMARK	
C018	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C019	1-124-916-11	ELECT 22MF	20%	50V
C020	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C022	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C023	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C024	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C025	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C026	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C032	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C035	1-163-033-91	CERAMIC CHIP 0.022MF		50V
C036	1-164-005-11	CERAMIC CHIP 0.47MF		25V
C037	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C039	1-163-011-11	CERAMIC CHIP 0.0015MF	10%	50V
C042	1-162-638-11	CERAMIC CHIP 1MF		16V
C044	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C522	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C523	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C524	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C525	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C528	1-163-105-00	CERAMIC CHIP 33PF	5%	50V
C529	1-163-169-00	CERAMIC CHIP 33PF	5%	50V
C541	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C542	1-163-037-11	CERAMIC CHIP 0.022MF	10%	25V
C543	1-164-161-11	CERAMIC CHIP 0.0022MF	10%	50V
C544	1-164-161-11	CERAMIC CHIP 0.0022MF	10%	50V
C546	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C547	1-163-020-00	CERAMIC CHIP 0.0082MF	10%	50V
C549	1-163-989-11	CERAMIC CHIP 0.033MF	10%	25V
C550	1-163-141-00	CERAMIC CHIP 0.001MF	5%	50V
C559	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V
C560	1-164-161-11	CERAMIC CHIP 0.0022MF	10%	50V
C563	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C564	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C565	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C566	1-163-031-11	CERAMIC CHIP 0.01MF		50V
C567	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C568	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V
C569	1-164-161-11	CERAMIC CHIP 0.0022MF	10%	50V
C570	1-162-568-11	CERAMIC CHIP 0.33MF	10%	16V
C571	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C2001	1-163-235-11	CERAMIC CHIP 22PF	5%	50V
C2002	1-163-235-11	CERAMIC CHIP 22PF	5%	50V
C2004	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C2005	1-163-038-91	CERAMIC CHIP 0.1MF		25V
C2008	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C2016	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C2017	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C2018	1-164-505-11	CERAMIC CHIP 2.2MF		16V
C2019	1-124-916-11	ELECT 22MF	20%	50V
C2020	1-164-222-11	CERAMIC CHIP 0.22MF		25V
C2021	1-163-113-00	CERAMIC CHIP 68PF	5%	50V
C2024	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C2025	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C2027	1-164-222-11	CERAMIC CHIP 0.22MF		25V
< FILTER >				
CD001	1-579-126-11	VIBRATOR, CERAMIC		
< CONNECTOR >				
CN1413	1-695-301-11	CONNECTOR, BOARD TO BOARD 40P		

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
CN1426	*1-568-881-51	PIN, CONNECTOR 6P		R020	1-216-049-00	METAL GLAZE 1K 5%	1/10W
CN1432	*1-568-882-51	PIN, CONNECTOR 7P		R021	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
CN1435	*1-568-881-51	PIN, CONNECTOR 6P		R022	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
< DIODE >				R023	1-216-025-00	METAL GLAZE 100 5%	1/10W
D001	8-719-027-82	DIODE MA3039H		R024	1-216-025-00	METAL GLAZE 100 5%	1/10W
D2001	8-719-036-58	DIODE MA3030-H		R025	1-216-049-00	METAL GLAZE 1K 5%	1/10W
D2003	8-719-914-44	DIODE DAP202K		R026	1-216-049-00	METAL GLAZE 1K 5%	1/10W
D2007	8-719-914-44	DIODE DAP202K		R027	1-216-049-00	METAL GLAZE 1K 5%	1/10W
< IC >				R028	1-216-677-11	METAL CHIP 12K 0.50%	1/10W
IC001	8-759-294-04	IC SDA30C163-2GEG		R030	1-216-049-00	METAL GLAZE 1K 5%	1/10W
IC002	8-759-327-55	IC TMS27PC010A15FMAE230		R032	1-216-049-00	METAL GLAZE 1K 5%	1/10W
	1-750-797-11	SOCKET, PLCC ; IC002		R033	1-216-049-00	METAL GLAZE 1K 5%	1/10W
IC561	8-752-347-92	IC CXD2018Q		R034	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
IC562	8-759-998-98	IC LM358D		R035	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
				R038	1-216-073-00	METAL GLAZE 10K 5%	1/10W
IC563	8-759-991-41	IC LM78L05ACZ		R049	1-216-049-00	METAL GLAZE 1K 5%	1/10W
IC2002	8-759-262-58	IC SDA5273P-C22-GEG		R050	1-216-073-00	METAL GLAZE 10K 5%	1/10W
IC2003	8-759-188-60	IC MB81C4256A-70PSZG		R051	1-216-081-00	METAL GLAZE 22K 5%	1/10W
< COIL >				R052	1-216-073-00	METAL GLAZE 10K 5%	1/10W
L001	1-408-421-00	INDUCTOR 100UH		R053	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
L561	1-408-409-00	INDUCTOR 10UH		R054	1-216-081-00	METAL GLAZE 22K 5%	1/10W
L562	1-408-409-00	INDUCTOR 10UH		R055	1-216-081-00	METAL GLAZE 22K 5%	1/10W
L563	1-408-947-00	INDUCTOR 2.2MMH		R060	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
L2001	1-410-674-31	INDUCTOR 82UH		R067	1-216-043-91	METAL GLAZE 560 5%	1/10W
< TRANSISTOR >				R068	1-216-043-91	METAL GLAZE 560 5%	1/10W
Q002	8-729-216-22	TRANSISTOR 2SA1162-G		R069	1-216-037-00	METAL GLAZE 330 5%	1/10W
Q003	8-729-920-74	TRANSISTOR 2SC2412K-QR		R071	1-216-198-91	METAL GLAZE 1K 5%	1/8W
Q564	8-729-216-22	TRANSISTOR 2SA1162-G		R535	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
Q565	8-729-920-74	TRANSISTOR 2SC2412K-QR		R536	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
Q566	8-729-920-74	TRANSISTOR 2SC2412K-QR		R538	1-216-025-00	METAL GLAZE 100 5%	1/10W
Q567	8-729-901-01	TRANSISTOR DTC144EK		R539	1-216-657-11	METAL CHIP 1.8K 0.50%	1/10W
Q2001	8-729-920-74	TRANSISTOR 2SC2412K-QR		R541	1-216-049-00	METAL GLAZE 1K 5%	1/10W
Q2002	8-729-920-74	TRANSISTOR 2SC2412K-QR		R542	1-216-025-00	METAL GLAZE 100 5%	1/10W
Q2003	8-729-216-22	TRANSISTOR 2SA1162-G		R544	1-216-085-00	METAL GLAZE 33K 5%	1/10W
Q2004	8-729-920-74	TRANSISTOR 2SC2412K-QR		R545	1-216-033-00	METAL GLAZE 220 5%	1/10W
Q2005	8-729-920-74	TRANSISTOR 2SC2412K-QR		R546	1-216-061-00	METAL GLAZE 3.3K 5%	1/10W
Q2006	8-729-901-01	TRANSISTOR DTC144EK		R547	1-216-651-11	METAL CHIP 1K 0.50%	1/10W
Q2008	8-729-901-00	TRANSISTOR DTC124EK		R551	1-216-049-00	METAL GLAZE 1K 5%	1/10W
< RESISTOR >				R552	1-216-097-00	METAL GLAZE 100K 5%	1/10W
JR551	1-216-295-91	METAL GLAZE 0 5%	1/10W	R553	1-216-085-00	METAL GLAZE 33K 5%	1/10W
JR553	1-216-295-91	METAL GLAZE 0 5%	1/10W	R559	1-216-049-00	METAL GLAZE 1K 5%	1/10W
JR557	1-216-295-91	METAL GLAZE 0 5%	1/10W	R560	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R001	1-216-025-00	METAL GLAZE 100 5%	1/10W	R564	1-216-091-00	METAL GLAZE 56K 5%	1/10W
R002	1-216-025-00	METAL GLAZE 100 5%	1/10W	R565	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R003	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R566	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R004	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R567	1-216-085-00	METAL GLAZE 33K 5%	1/10W
R005	1-216-295-91	METAL GLAZE 0 5%	1/10W	R568	1-216-109-00	METAL GLAZE 330K 5%	1/10W
R007	1-216-073-00	METAL GLAZE 10K 5%	1/10W	R570	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R008	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R571	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R010	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R2001	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R011	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R2002	1-216-043-91	METAL GLAZE 560 5%	1/10W
R012	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R2003	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R014	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R2004	1-216-037-00	METAL GLAZE 330 5%	1/10W
R016	1-216-045-00	METAL GLAZE 680 5%	1/10W	R2005	1-216-041-00	METAL GLAZE 470 5%	1/10W
R017	1-216-049-00	METAL GLAZE 1K 5%	1/10W	R2007	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R018	1-216-041-00	METAL GLAZE 470 5%	1/10W	R2008	1-216-025-00	METAL GLAZE 100 5%	1/10W
R019	1-216-025-00	METAL GLAZE 100 5%	1/10W	R2009	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
				R2010	1-216-025-00	METAL GLAZE 100 5%	1/10W
				R2011	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W
				R2012	1-216-631-11	METAL CHIP 150 0.50%	1/10W

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The components identified by shading and marked **1** are critical for safety.
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
R2013	1-216-631-11	METAL CHIP 150 0.50% 1/10W	
R2014	1-216-631-11	METAL CHIP 150 0.50% 1/10W	
R2017	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R2018	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R2019	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R2020	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R2021	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R2022	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R2023	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R2025	1-216-063-00	METAL GLAZE 3.9K 5% 1/10W	
R2026	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R2030	1-216-295-91	METAL GLAZE 0 5% 1/10W	
R2032	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2036	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2037	1-216-049-00	METAL GLAZE 1K 5% 1/10W	
R2039	1-216-041-00	METAL GLAZE 470 5% 1/10W	
R2040	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	

< CRYSTAL >

X2001 1-579-965-21 VIBRATOR, CRYSTAL

*A-1637-002-A G BOARD, COMPLETE

< CAPACITOR >

C600	1-125-497-11	ELECT(BLOCK) 100MF 20% 400V	
C601	1-130-202-00	FILM 0.022MF 10% 400V	
C605	1-124-910-11	ELECT 47MF 20% 50V	
C608	1-124-903-11	ELECT 1MF 20% 50V	
C611	1-102-002-00	CERAMIC 680PF 10% 500V	
C612	1-130-481-00	FILM 0.0068MF 5% 50V	
C613	1-129-722-00	FILM 0.047MF 10% 630V	
C617	1-162-116-00	CERAMIC 680PF 10% 2KV	
C618	1-162-115-00	CERAMIC 330PF 10% 2KV	
C619	1-102-002-00	CERAMIC 680PF 10% 500V	
C620	1-130-772-00	FILM 0.22MF 5% 63V	
C621	1-124-347-00	ELECT 100MF 20% 160V	
C622	1-124-347-00	ELECT 100MF 20% 160V	
C623	1-126-800-51	ELECT 2200MF 20% 25V	
C624	1-124-347-00	ELECT 100MF 20% 160V	
C625	1-126-183-11	ELECT 1000MF 20% 16V	
C626	1-126-800-51	ELECT 2200MF 20% 25V	
C627	1-137-365-11	FILM 0.0015MF 5% 50V	
C628	1-124-910-11	ELECT 47MF 20% 50V	
C629	1-124-907-11	ELECT 10MF 20% 50V	
C632	1-137-372-11	FILM 0.022MF 5% 50V	
C633	1-137-419-11	FILM 0.033MF 5% 63V	
C636	1-130-777-00	FILM 0.1MF 5% 63V	
C640	1-124-916-11	ELECT 22MF 20% 50V	
C643	1-162-116-00	CERAMIC 680PF 10% 2KV	
C650	1-102-002-00	CERAMIC 680PF 10% 500V	
C651	1-124-480-11	ELECT 470MF 20% 25V	
C653	1-124-478-11	ELECT 100MF 20% 25V	
C654	1-124-907-11	ELECT 10MF 20% 50V	
C655	1-124-120-11	ELECT 220MF 20% 16V	
C658	1-126-943-11	ELECT 2200MF 20% 25V	
C659	1-124-478-11	ELECT 100MF 20% 25V	
C660	1-126-943-11	ELECT 2200MF 20% 25V	
C661	1-124-478-11	ELECT 100MF 20% 25V	

C662	1-126-943-11	ELECT 2200MF 20% 25V	
C663	1-126-943-11	ELECT 2200MF 20% 25V	
C664	1-126-943-11	ELECT 2200MF 20% 25V	
C665	1-126-943-11	ELECT 2200MF 20% 25V	
C666	1-126-943-11	ELECT 2200MF 20% 25V	
C667	1-126-943-11	ELECT 2200MF 20% 25V	
C669	1-124-907-11	ELECT 10MF 20% 50V	
C670	1-102-002-00	CERAMIC 680PF 10% 500V	
C671	1-102-002-00	CERAMIC 680PF 10% 500V	
C672	1-102-002-00	CERAMIC 680PF 10% 500V	
C673	1-102-002-00	CERAMIC 680PF 10% 500V	
C674	1-124-480-11	ELECT 470MF 20% 25V	
C675	1-124-907-11	ELECT 10MF 20% 50V	
C680	1-124-478-11	ELECT 100MF 20% 25V	
C681	1-124-910-11	ELECT 47MF 20% 50V	
C1802	1-162-599-12	CERAMIC 0.0047MF 20% 400V	
C1803	1-162-599-12	CERAMIC 0.0047MF 20% 400V	
C1804	1-125-555-11	ELECT 330MF 20% 400V	
C1805	1-162-578-51	CERAMIC 0.0047MF 20% 400V	
C1808	1-162-578-51	CERAMIC 0.0047MF 20% 400V	
C1816	1-136-519-12	FILM 0.47MF 20% 300V	
C1817	1-136-519-12	FILM 0.47MF 20% 300V	
C1820	1-162-599-12	CERAMIC 0.0047MF 20% 400V	
C1821	1-162-599-12	CERAMIC 0.0047MF 20% 400V	

< CONNECTOR >

CN1605	*1-568-879-11	PIN, CONNECTOR 4P	
CN1627	*1-564-512-11	PLUG, CONNECTOR 9P	
CN1628	*1-568-882-51	PIN, CONNECTOR 7P	
CN1652	1-564-511-11	PLUG, CONNECTOR 8P	
CN1653	*1-568-879-11	PIN, CONNECTOR 4P	
CN1654	1-766-278-21	PIN, CONNECTOR (PC BOARD) 5P	
CN1655	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN1656	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN1661	1-695-915-11	TAB (CONTACT)	
CN1857	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P	
CN1858	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
CN1859	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
CN1860	*1-580-689-11	PIN, CONNECTOR (PC BOARD) 4P	
CN1861	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	

< DIODE >

D602	8-719-302-43	DIODE EL1Z	
D603	8-719-029-04	DIODE D5L60	
D604	*4-389-343-11	SPRING, IC ; D603	
	8-719-029-04	DIODE D5L60	
	*4-389-343-11	SPRING, IC ; D604	
D606	8-719-302-43	DIODE EL1Z	
D608	8-719-300-33	DIODE RU-3AM	
D610	8-719-970-39	DIODE ESAC92M-02	
	*4-389-343-11	SPRING, IC ; D610	
D611	8-719-510-41	DIODE D10SC9M	
	*4-389-343-11	SPRING, IC ; D611	
D612	8-719-510-09	DIODE D10SC6M	
	*4-389-343-11	SPRING, IC ; D612	
D613	8-719-300-33	DIODE RU-3AM	
D614	8-719-510-41	DIODE D10SC9M	
	*4-389-343-11	SPRING, IC ; D614	
D615	8-719-975-76	DIODE SB140	
D616	8-719-923-78	DIODE MTZJ-12	

shading and marked : are critical
for safety.
Replace only with the part number
specified.

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REF.NO.	PART NO.	DESCRIPTION	REMARK
D617	8-719-110-03	DIODE RD7.5ESB2	
D619	8-719-975-76	DIODE SB140	
D620	8-719-901-33	DIODE 1SS133	
D621	8-719-510-41	DIODE D10SC9M	
	*4-389-343-11	SPRING, IC ; D621	
D622	8-719-510-41	DIODE D10SC9M	
	*4-389-343-11	SPRING, IC ; D622	
D623	8-719-901-33	DIODE 1SS133	
D634	8-719-901-33	DIODE 1SS133	
D638	8-719-901-33	DIODE 1SS133	
D650	8-719-908-03	DIODE GP08D	
D653	8-719-908-03	DIODE GP08D	
D654	8-719-908-03	DIODE GP08D	
D655	8-719-908-03	DIODE GP08D	
D656	8-719-908-03	DIODE GP08D	
D657	8-719-908-03	DIODE GP08D	
D658	8-719-908-03	DIODE GP08D	
D659	8-719-908-03	DIODE GP08D	
D660	8-719-923-78	DIODE MTZJ-12	
D1801	8-719-510-53	DIODE D4SB60L	
< FUSE >			
	1-576-232-21	FUSE (H.B.C.) 5A/250V	
< FERRITE BEAD >			
FB607	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB612	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
FB622	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
< IC >			
IC601	8-759-073-29	IC TDA4605-3	
IC602	8-759-908-15	IC TL431CLP	
IC603	8-749-923-44	IC SFH617G-1	
IC605	8-759-708-05	IC NJM78L05A	
< COIL >			
L601	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
L602	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
L603	1-459-862-11	COIL, CHOKE 90UH	
L604	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
L606	1-459-862-11	COIL, CHOKE 90UH	
L609	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH	
L610	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH	
L611	1-412-540-31	INDUCTOR 180UH	
L621	1-412-533-21	INDUCTOR 47UH	
L622	1-412-533-21	INDUCTOR 47UH	
L623	1-412-533-21	INDUCTOR 47UH	
< LINE FILTER >			
LF1801	1-424-436-11	TRANSFORMER, LINE FILTER	
LF1802	1-424-436-11	TRANSFORMER, LINE FILTER	
LF1803	1-424-436-11	TRANSFORMER, LINE FILTER	
< IC LINK >			
	1-532-637-91	LINK, IC 1A (ICP-N25)	

REF.NO.	PART NO.	DESCRIPTION	REMARK
< TRANSISTOR >			
Q601	8-729-016-14	TRANSISTOR BUZ91A-E3155	
	4-200-001-11	HOLDER, IC ; Q601	
	4-201-023-11	SPACER, INSULATING ; Q601	
Q611	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q612	8-729-900-65	TRANSISTOR DTA144ES	
Q614	8-729-209-15	TRANSISTOR 2SD2012	
	*4-389-343-11	SPRING, IC ; Q614	
Q618	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q620	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q621	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q623	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q629	8-729-378-84	TRANSISTOR 2SD788-5	
< RESISTOR >			
R601	1-216-353-00	METAL OXIDE 2.2 5% 1W F	
R602	1-249-425-11	CARBON 4.7K 5% 1/4W	
R604	1-214-921-00	CARBON 220K 5% 1/2W	
R605	1-249-392-11	CARBON 8.2 5% 1/4W	
R606	1-249-409-11	CARBON 220 5% 1/4W	
R607	1-249-423-11	CARBON 3.3K 5% 1/4W	
R608	1-215-926-51	METAL OXIDE 33K 5% 3W F	
R609	1-249-392-11	CARBON 8.2 5% 1/4W	
R610	1-247-881-00	CARBON 120K 5% 1/4W	
R611	1-247-739-11	CARBON 100 5% 1/2W	
R612	1-247-897-11	CARBON 560K 5% 1/4W	
R613	1-247-893-11	CARBON 390K 5% 1/4W	
R614	1-216-485-11	METAL OXIDE 5.6K 5% 3W F	
R615	1-216-485-11	METAL OXIDE 5.6K 5% 3W F	
R616	1-216-485-11	METAL OXIDE 5.6K 5% 3W F	
R617	1-249-409-11	CARBON 220 5% 1/4W	
R619	1-216-444-11	METAL OXIDE 82K 5% 1W F	
R620	1-249-415-11	CARBON 680 5% 1/4W	
R621	1-215-431-00	METAL 2.7K 1% 1/4W	
R622	1-249-413-11	CARBON 470 5% 1/4W	
R623	1-249-429-11	CARBON 10K 5% 1/4W	
R626	1-215-405-00	METAL 220 1% 1/4W	
R628	1-249-410-11	CARBON 270 5% 1/4W F	
R629	1-215-460-00	METAL 43K 1% 1/4W	
R632	1-249-409-11	CARBON 220 5% 1/4W	
R633	1-249-415-11	CARBON 680 5% 1/4W	
R634	1-215-477-00	METAL 220K 1% 1/4W	
R635	1-247-863-91	CARBON 22K 5% 1/4W	
R636	1-215-890-11	METAL OXIDE 470 5% 2W F	
R637	1-247-895-00	CARBON 470K 5% 1/4W	
R638	1-249-429-11	CARBON 10K 5% 1/4W	
R639	1-249-423-11	CARBON 3.3K 5% 1/4W	
R640	1-216-362-11	METAL OXIDE 0.27 5% 2W F	
R642	1-249-423-11	CARBON 3.3K 5% 1/4W	
R643	1-249-377-11	CARBON 0.47 5% 1/4W F	
R644	1-249-425-11	CARBON 4.7K 5% 1/4W	
R645	1-215-467-00	METAL 82K 1% 1/4W	
R649	1-249-424-11	CARBON 3.9K 5% 1/4W	
R651	1-249-426-11	CARBON 5.6K 5% 1/4W	
R659	1-249-414-11	CARBON 560 5% 1/4W F	
R660	1-249-413-11	CARBON 470 5% 1/4W	
R687	1-249-417-11	CARBON 1K 5% 1/4W F	
R691	1-249-429-11	CARBON 10K 5% 1/4W	
R694	1-249-421-11	CARBON 2.2K 5% 1/4W	
R697	1-249-382-11	CARBON 1.2 5% 1/4W F	

G CR CB

These components identified by shading and marked with a critical for safety.
Replace only with the part number specified.

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1801	1-260-132-11	CARBON 560K 5% 1/2W	
R1806	1-205-949-11	WIREWOUND 1.8 5% 10W	
R1807	1-205-949-11	WIREWOUND 1.8 5% 10W	
R1808	1-244-945-91	CARBON 1M 5% 1/2W	
R1809	1-218-265-11	METAL 8.2M 5% 1W	

R1810	1-205-949-11	WIREWOUND 1.8 5% 10W	
R1811	1-205-949-11	WIREWOUND 1.8 5% 10W	

< VARIABLE RESISTOR >

RV601	1-241-628-11	RES, ADJ, CARBON 2.2K	
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< RELAY >

RY601	1-755-032-11	RELAY	
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< TRANSFORMER >

T601	1-426-954-11	TRANSFORMER, CONVERTER	
T602	1-426-953-11	TRANSFORMER, CONVERTER	
T603	1-426-955-11	TRANSFORMER, POWER	
T604	1-450-149-11	TRANSFORMER, HEATER	

*A-1638-049-A CR BOARD, COMPLETE

< CAPACITOR >

C701	1-162-115-00	CERAMIC 330PF 10% 2KV	
C702	1-123-948-00	ELECT 22MF 20% 250V	
C703	1-102-050-00	CERAMIC 0.01MF 99% 500V	
C704	1-162-115-00	CERAMIC 330PF 10% 2KV	
C705	1-130-479-00	MYLAR 0.0047MF 5% 50V	
C706	1-101-006-00	CERAMIC 0.047MF 50V	
C707	1-101-006-00	CERAMIC 0.047MF 50V	
C709	1-124-120-11	ELECT 220MF 20% 16V	
C710	1-124-120-11	ELECT 220MF 20% 16V	
C711	1-102-114-00	CERAMIC 470PF 10% 50V	

< CONNECTOR >

CR1	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
CR3	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
CR4	1-564-511-11	PLUG, CONNECTOR 8P	
CR15	*1-568-880-51	PIN, CONNECTOR 5P	

< CRT SOCKET >

	1-251-179-11	SOCKET, CRT	
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< DIODE >

D701	8-719-901-33	DIODE 1SS133	
D702	8-719-901-33	DIODE 1SS133	
D703	8-719-901-33	DIODE 1SS133	
D704	8-719-901-33	DIODE 1SS133	
D705	8-719-901-33	DIODE 1SS133	
D706	8-719-901-33	DIODE 1SS133	
D707	8-719-921-88	DIODE MTZJ-13B	

< COIL >

L701	1-408-429-00	INDUCTOR 470UH	
L702	1-408-159-00	COIL, SPOOK CHOKE 3.3UH	
L703	1-408-159-00	COIL, SPOOK CHOKE 3.3UH	
L704	1-408-413-00	INDUCTOR 22UH	

REF.NO.	PART NO.	DESCRIPTION	REMARK
		< NEON LAMP >	

NL702	1-519-237-14	LAMP, NEON	
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< TRANSISTOR >

Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q703	8-729-119-80	TRANSISTOR 2SC2688-LK	
	4-373-933-01	SHEET (TRANSISTOR), BN ; Q703	
	4-382-854-11	SCREW (M3X10), P, SW (+) ; Q703	
Q704	8-729-255-12	TRANSISTOR 2SC2551-0	
Q705	8-729-200-17	TRANSISTOR 2SA1091-0	
Q706	8-729-200-17	TRANSISTOR 2SA1091-0	

< RESISTOR >

R701	1-202-847-00	SOLID 560K 20% 1/2W	
R702	1-202-814-11	SOLID 33K 20% 1/2W	
R704	1-202-842-11	SOLID 220K 20% 1/2W	
R705	1-202-828-11	SOLID 6.8K 20% 1/2W	
R706	1-202-561-00	SOLID 330 5% 1/2W	
R707	1-216-510-11	METAL OXIDE 8.2K 5% 5W F	
R708	1-249-405-11	CARBON 100 5% 1/4W F	
R709	1-249-405-11	CARBON 100 5% 1/4W F	
R710	1-215-927-00	METAL OXIDE 47K 5% 3W F	
R711	1-249-405-11	CARBON 100 5% 1/4W F	
R712	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R714	1-249-401-11	CARBON 47 5% 1/4W	
R716	1-247-807-31	CARBON 100 5% 1/4W	
R717	1-249-399-11	CARBON 33 5% 1/4W	
R718	1-249-412-11	CARBON 390 5% 1/4W	
R719	1-247-811-31	CARBON 150 5% 1/4W	
R720	1-247-807-31	CARBON 100 5% 1/4W	
R721	1-249-409-11	CARBON 220 5% 1/4W	
R722	1-215-423-00	METAL 1.2K 1% 1/4W	
R724	1-215-429-00	METAL 2.2K 1% 1/4W	

< VARIABLE RESISTOR >

RV701	1-249-410-11	CARBON 270 5% 1/4W	
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< SPARK GAP >

SG702	1-519-422-11	GAP, SPARK	
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*A-1638-050-A CB BOARD, COMPLETE

< CAPACITOR >

C761	1-162-115-00	CERAMIC 330PF 10% 2KV	
C762	1-123-948-00	ELECT 22MF 20% 250V	
C763	1-102-050-00	CERAMIC 0.01MF 99% 500V	
C764	1-162-115-00	CERAMIC 330PF 10% 2KV	
C765	1-130-479-00	MYLAR 0.0047MF 5% 50V	
C766	1-101-006-00	CERAMIC 0.047MF 50V	
C767	1-101-006-00	CERAMIC 0.047MF 50V	
C769	1-124-120-11	ELECT 220MF 20% 16V	
C770	1-124-120-11	ELECT 220MF 20% 16V	
C771	1-102-114-00	CERAMIC 470PF 10% 50V	

< CONNECTOR >

CB1	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
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shading and marked **!** are critical
for safety.
Replace only with the part number
specified.

CB

CG

REF.NO.	PART NO.	DESCRIPTION	REMARK
CB3	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
CB4	1-564-511-11	PLUG, CONNECTOR 8P	
CB5	1-564-511-11	PLUG, CONNECTOR 8P	
CB17	*1-568-880-51	PIN, CONNECTOR 5P	
< CRT SOCKET >			
CRT761	1-251-179-11	SOCKET, CRT	
< DIODE >			
D761	8-719-901-33	DIODE 1SS133	
D762	8-719-901-33	DIODE 1SS133	
D763	8-719-901-33	DIODE 1SS133	
D764	8-719-901-33	DIODE 1SS133	
D765	8-719-901-33	DIODE 1SS133	
D766	8-719-901-33	DIODE 1SS133	
D768	8-719-901-33	DIODE 1SS133	
< COIL >			
L761	1-408-429-00	INDUCTOR 470UH	
L762	1-408-159-00	COIL, SPOOK CHOKE 3.3UH	
L763	1-408-159-00	COIL, SPOOK CHOKE 3.3UH	
L764	1-408-413-00	INDUCTOR 22UH	
< NEON LAMP >			
NL762	1-519-237-14	LAMP, NEON	
< TRANSISTOR >			
Q761	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q762	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q763	8-729-119-80	TRANSISTOR 2SC2688-LK	
	4-373-933-01	SHEET (TRANSISTOR), BN ; Q763	
	4-382-854-11	SCREW (M3X10), P, SW (+) ; Q763	
Q764	8-729-255-12	TRANSISTOR 2SC2551-0	
Q765	8-729-200-17	TRANSISTOR 2SA1091-0	
Q766	8-729-200-17	TRANSISTOR 2SA1091-0	
< RESISTOR >			
R761	1-202-847-00	SOLID 560K 20% 1/2W	
R762	1-202-814-11	SOLID 33K 20% 1/2W	
R764	1-202-842-11	SOLID 220K 20% 1/2W	
R765	1-202-828-11	SOLID 6.8K 20% 1/2W	
R766	1-202-561-00	SOLID 330 5% 1/2W	
R767	1-216-510-11	METAL OXIDE 8.2K 5% 5W F	
R768	1-249-405-11	CARBON 100 5% 1/4W F	
R769	1-249-405-11	CARBON 100 5% 1/4W F	
R770	1-215-927-00	METAL OXIDE 47K 5% 3W F	
R771	1-249-405-11	CARBON 100 5% 1/4W F	
R772	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R774	1-249-401-11	CARBON 47 5% 1/4W	
R776	1-247-807-31	CARBON 100 5% 1/4W	
R777	1-249-399-11	CARBON 33 5% 1/4W	
R778	1-249-412-11	CARBON 390 5% 1/4W	
R779	1-249-415-11	CARBON 680 5% 1/4W	
R780	1-247-807-31	CARBON 100 5% 1/4W	
R781	1-249-409-11	CARBON 220 5% 1/4W	
R782	1-215-423-00	METAL 1.2K 1% 1/4W	
R783	1-215-433-00	METAL 3.3K 1% 1/4W	
R784	1-215-429-00	METAL 2.2K 1% 1/4W	
R785	1-215-418-00	METAL 750 1% 1/4W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
< SPARK GAP >			
SG762	1-519-422-11	GAP, SPARK	

	*A-1638-051-A	CG BOARD, COMPLETE	

< CAPACITOR >			
C731	1-162-115-00	CERAMIC 330PF 10% 2KV	
C732	1-123-948-00	ELECT 22MF 20% 250V	
C733	1-102-050-00	CERAMIC 0.01MF 99% 500V	
C734	1-162-115-00	CERAMIC 330PF 10% 2KV	
C735	1-130-479-00	MYLAR 0.0047MF 5% 50V	
C736	1-101-006-00	CERAMIC 0.047MF 50V	
C737	1-101-006-00	CERAMIC 0.047MF 50V	
C739	1-124-120-11	ELECT 220MF 20% 16V	
C740	1-124-120-11	ELECT 220MF 20% 16V	
C741	1-102-114-00	CERAMIC 470PF 10% 50V	
< CONNECTOR >			
CG1	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P	
CG3	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P	
CG16	*1-568-880-51	PIN, CONNECTOR 5P	
< CRT SOCKET >			
	1-251-179-11	SOCKET, CRT	
< DIODE >			
D731	8-719-901-33	DIODE 1SS133	
D732	8-719-901-33	DIODE 1SS133	
D733	8-719-901-33	DIODE 1SS133	
D734	8-719-901-33	DIODE 1SS133	
D735	8-719-901-33	DIODE 1SS133	
D736	8-719-901-33	DIODE 1SS133	
D737	8-719-901-33	DIODE 1SS133	
< COIL >			
L731	1-408-429-00	INDUCTOR 470UH	
L732	1-408-159-00	COIL, SPOOK CHOKE 3.3UH	
L733	1-408-159-00	COIL, SPOOK CHOKE 3.3UH	
L734	1-408-413-00	INDUCTOR 22UH	
< NEON LAMP >			
NL732	1-519-237-14	LAMP, NEON	
< TRANSISTOR >			
Q731	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q732	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q733	8-729-119-80	TRANSISTOR 2SC2688-LK	
	4-373-933-01	SHEET (TRANSISTOR), BN ; Q733	
	4-382-854-11	SCREW (M3X10), P, SW (+) ; Q733	
Q734	8-729-255-12	TRANSISTOR 2SC2551-0	
Q735	8-729-200-17	TRANSISTOR 2SA1091-0	
Q736	8-729-200-17	TRANSISTOR 2SA1091-0	
< RESISTOR >			
R731	1-202-847-00	SOLID 560K 20% 1/2W	
R732	1-202-814-11	SOLID 33K 20% 1/2W	
R734	1-202-842-11	SOLID 220K 20% 1/2W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R735	1-202-828-11	SOLID 6.8K 20% 1/2W	
R736	1-202-561-00	SOLID 330 5% 1/2W	
R737	1-216-510-11	METAL OXIDE 8.2K 5% 5W F	
R738	1-249-405-11	CARBON 100 5% 1/4W F	
R739	1-249-405-11	CARBON 100 5% 1/4W F	
R740	1-215-927-00	METAL OXIDE 47K 5% 3W F	
R741	1-249-405-11	CARBON 100 5% 1/4W F	
R742	1-249-421-11	CARBON 2.2K 5% 1/4W F	
R744	1-249-401-11	CARBON 47 5% 1/4W	
R745	1-215-455-00	METAL 27K 1% 1/4W	
R746	1-247-807-31	CARBON 100 5% 1/4W	
R747	1-249-399-11	CARBON 33 5% 1/4W	
R748	1-249-412-11	CARBON 390 5% 1/4W	
R750	1-247-807-31	CARBON 100 5% 1/4W	
R751	1-249-409-11	CARBON 220 5% 1/4W	
R752	1-215-423-00	METAL 1.2K 1% 1/4W	
R754	1-215-429-00	METAL 2.2K 1% 1/4W	
R755	1-249-410-11	CARBON 270 5% 1/4W	

< SPARK GAP >

SG732 1-519-422-11 GAP, SPARK

*1-650-883-11 DS BOARD

< CAPACITOR >

C1841	1-126-233-11	ELECT	22MF	20%	25V
C1842	1-126-233-11	ELECT	22MF	20%	25V

< DIODE >

D1841	8-719-911-19	DIODE 1SS119
D1842	8-719-911-19	DIODE 1SS119
D1843	8-719-911-19	DIODE 1SS119
D1844	8-719-911-19	DIODE 1SS119

< CONNECTOR >

DS6 1-691-182-11 CONNECTOR (BOARD TO BOARD) 12P

< IC >

IC1801 8-759-183-37 IC CA0007AD

< RESISTOR >

R1841	1-215-441-00	METAL	6.8K	1%	1/4W
R1842	1-215-455-00	METAL	27K	1%	1/4W
R1844	1-215-445-00	METAL	10K	1%	1/4W
R1850	1-215-429-00	METAL	2.2K	1%	1/4W
R1851	1-215-421-00	METAL	1K	1%	1/4W

*A-1640-159-A D BOARD, COMPLETE

1-533-223-11 CLIP, FUSE
4-382-854-11 SCREW (M3X10), P, SW (+)

< CAPACITOR >

C901	1-126-320-11	ELECT	10MF	20%	16V
C902	1-124-477-11	ELECT	47MF	20%	16V

REF.NO.	PART NO.	DESCRIPTION	REMARK
C903	1-130-471-00	MYLAR 0.001MF	5% 50V
C904	1-130-471-00	MYLAR 0.001MF	5% 50V
C905	1-124-477-11	ELECT 47MF	20% 16V
C906	1-126-233-11	ELECT 22MF	20% 50V
C907	1-126-101-11	ELECT 100MF	20% 16V
C908	1-124-907-11	ELECT 10MF	20% 50V
C910	1-130-483-00	MYLAR 0.01MF	5% 50V
C911	1-131-341-00	TANTALUM 0.1MF	20% 16V
C912	1-124-903-11	ELECT 1MF	20% 50V
C913	1-126-233-11	ELECT 22MF	20% 50V
C914	1-126-803-11	ELECT 47MF	20% 16V
C915	1-124-927-11	ELECT 4.7MF	20% 50V
C916	1-102-074-00	CERAMIC 0.001MF	10% 50V
C917	1-130-471-00	MYLAR 0.001MF	5% 50V
C918	1-102-963-00	CERAMIC 33PF	5% 50V
C919	1-102-963-00	CERAMIC 33PF	5% 50V
C920	1-102-963-00	CERAMIC 33PF	5% 50V
C921	1-102-963-00	CERAMIC 33PF	5% 50V
C922	1-102-963-00	CERAMIC 33PF	5% 50V
C923	1-102-963-00	CERAMIC 33PF	5% 50V
C931	1-102-973-00	CERAMIC 100PF	5% 50V
C932	1-124-903-11	ELECT 1MF	20% 50V
C934	1-126-233-11	ELECT 22MF	20% 25V
C935	1-126-233-11	ELECT 22MF	20% 25V
C936	1-126-233-11	ELECT 22MF	20% 25V
C937	1-126-233-11	ELECT 22MF	20% 25V
C938	1-126-233-11	ELECT 22MF	20% 25V
C939	1-126-233-11	ELECT 22MF	20% 25V
C940	1-126-233-11	ELECT 22MF	20% 25V
C1701	1-124-907-11	ELECT 10MF	20% 50V
C1702	1-124-907-11	ELECT 10MF	20% 50V
C1703	1-124-907-11	ELECT 10MF	20% 50V
C1704	1-124-667-11	ELECT 10MF	20% 50V
C1705	1-102-963-00	CERAMIC 33PF	5% 50V
C1706	1-102-963-00	CERAMIC 33PF	5% 50V
C1707	1-102-963-00	CERAMIC 33PF	5% 50V
C1708	1-102-963-00	CERAMIC 33PF	5% 50V
C1709	1-102-963-00	CERAMIC 33PF	5% 50V
C1710	1-102-963-00	CERAMIC 33PF	5% 50V
C1711	1-126-233-11	ELECT 22MF	20% 50V
C1712	1-126-233-11	ELECT 22MF	20% 25V
C1713	1-131-353-00	TANTALUM 10MF	10% 25V
C1714	1-124-120-11	ELECT 220MF	20% 25V
C1715	1-124-478-11	ELECT 100MF	20% 25V
C1716	1-126-803-11	ELECT 47MF	20% 25V
C1717	1-126-803-11	ELECT 47MF	20% 25V
C1718	1-131-353-00	TANTALUM 10MF	10% 25V
C1719	1-126-233-11	ELECT 22MF	20% 25V
C1720	1-130-491-00	MYLAR 0.047MF	5% 50V
C1721	1-130-491-00	MYLAR 0.047MF	5% 50V
C1722	1-130-491-00	MYLAR 0.047MF	5% 50V
C1724	1-126-233-11	ELECT 22MF	20% 25V
C1725	1-102-963-00	CERAMIC 33PF	5% 50V
C1726	1-124-122-11	ELECT 100MF	20% 35V
C1727	1-102-963-00	CERAMIC 33PF	5% 50V
C1728	1-102-963-00	CERAMIC 33PF	5% 50V
C1729	1-106-377-00	MYLAR 0.027MF	99% 200V
C1730	1-102-963-00	CERAMIC 33PF	5% 50V
C1731	1-124-122-11	ELECT 100MF	20% 35V
C1732	1-106-377-00	MYLAR 0.027MF	99% 200V

shading and marked are critical
for safety.
Replace only with the part number
specified.



REF.NO.	PART NO.	DESCRIPTION	REMARK
C1733	1-102-963-00	CERAMIC 33PF 5% 50V	
C1734	1-102-963-00	CERAMIC 33PF 5% 50V	
C1735	1-124-122-11	ELECT 100MF 20% 35V	
C1736	1-106-377-00	MYLAR 0.027MF 99% 200V	
C1737	1-124-937-11	ELECT 10MF 20% 16V	
C1738	1-124-122-11	ELECT 100MF 20% 35V	
C1739	1-136-153-00	FILM 0.01MF 5% 50V	
C1740	1-124-122-11	ELECT 100MF 20% 35V	
C1741	1-124-122-11	ELECT 100MF 20% 35V	
C1742	1-126-104-11	ELECT 470MF 20% 35V	
C1744	1-124-120-11	ELECT 220MF 20% 25V	
C1745	1-126-375-11	ELECT 100MF 20% 25V	
C1755	1-106-220-00	MYLAR 0.1MF 10% 100V	
C1756	1-106-220-00	MYLAR 0.1MF 10% 100V	
C1757	1-106-220-00	MYLAR 0.1MF 10% 100V	
C1758	1-106-220-00	MYLAR 0.1MF 10% 100V	
C1759	1-106-220-00	MYLAR 0.1MF 10% 100V	
C1760	1-106-220-00	MYLAR 0.1MF 10% 100V	
C1763	1-124-907-11	ELECT 10MF 20% 50V	
C1764	1-124-477-11	ELECT 47MF 20% 16V	
C1765	1-124-477-11	ELECT 47MF 20% 16V	
C1766	1-126-101-11	ELECT 100MF 20% 16V	
C1769	1-124-907-11	ELECT 10MF 20% 50V	
C1770	1-130-495-00	MYLAR 0.1MF 5% 50V	
C1771	1-124-907-11	ELECT 10MF 20% 50V	
C1772	1-124-907-11	ELECT 10MF 20% 50V	
C1861	1-102-074-00	CERAMIC 0.001MF 10% 50V	

< DIODE >

D1	1-766-280-11	PIN, CONNECTOR (PC BOARD) 7P
D2	1-766-281-21	PIN, CONNECTOR (PC BOARD) 8P
D3	*1-564-512-11	PLUG, CONNECTOR 9P
D4	1-766-278-21	PIN, CONNECTOR (PC BOARD) 5P
D5	1-766-281-21	PIN, CONNECTOR (PC BOARD) 8P
D6	1-691-169-11	PIN, CONNECTOR 12P
D7	*1-564-507-11	PLUG, CONNECTOR 4P
D8	1-766-276-21	PIN, CONNECTOR (PC BOARD) 3P
D9	*1-564-507-11	PLUG, CONNECTOR 4P
D14	*1-564-513-11	PLUG, CONNECTOR 10P
D901	8-719-911-19	DIODE 1SS119
D902	8-719-911-19	DIODE 1SS119
D1702	8-719-911-19	DIODE 1SS119
D1704	8-719-900-95	DIODE V09G
D1705	8-719-900-95	DIODE V09G
D1706	8-719-900-95	DIODE V09G
D1707	8-719-911-19	DIODE 1SS119
D1708	8-719-911-19	DIODE 1SS119
D1709	8-719-911-19	DIODE 1SS119
D1710	8-719-911-19	DIODE 1SS119
D1711	8-719-911-19	DIODE 1SS119
D1712	8-719-911-19	DIODE 1SS119
D1713	8-719-911-19	DIODE 1SS119
D1714	8-719-911-19	DIODE 1SS119
D1715	8-719-911-19	DIODE 1SS119
D1716	8-719-911-19	DIODE 1SS119
D1717	8-719-911-19	DIODE 1SS119
D1718	8-719-911-19	DIODE 1SS119
D1720	8-719-109-50	DIODE RD2.0ESB1
D1721	8-719-109-50	DIODE RD2.0ESB1
D1722	8-719-109-50	DIODE RD2.0ESB1

REF.NO.	PART NO.	DESCRIPTION	REMARK
D1723	8-719-109-50	DIODE RD2.0ESB1	
< FUSE >			
F901	1-532-237-00	FUSE, TIME-LAG (BET) 3.15A/250V	
F902	1-532-237-00	FUSE, TIME-LAG (BET) 3.15A/250V	
< IC >			
IC901	8-759-145-58	IC UPC4558C	
IC902	8-752-033-68	IC CXA1268P	
IC903	8-759-701-56	IC NJM78M05FA	
IC904	8-759-701-65	IC NJM79M05FA	
IC905	8-759-701-89	IC NJM7915FA	
IC906	8-759-148-84	IC UPC2415HF	
IC907	8-759-140-53	IC μ PD4053BC	
IC908	8-759-145-58	IC UPC4558C	
IC910	8-759-054-40	IC PA0036	
IC1701	8-759-602-19	IC M5220L	
IC1702	8-759-602-19	IC M5220L	
IC1703	8-759-602-19	IC M5220L	
IC1704	8-749-923-16	IC STK4278-L	
IC1705	8-749-923-16	IC STK4278-L	
IC1706	8-759-113-13	IC UPC1498H	
IC1707	8-759-113-13	IC UPC1498H	
IC1708	8-759-113-13	IC UPC1498H	
IC1709	8-759-145-58	IC UPC4558C	
IC1710	8-759-145-58	IC UPC4558C	
IC1714	8-759-145-58	IC UPC4558C	
IC1715	8-759-145-58	IC UPC4558C	
IC1718	8-759-145-58	IC UPC4558C	

< COIL >

L901	1-459-313-00	COIL WITH CORE (HWC)
L902	1-459-313-00	COIL WITH CORE (HWC)
L903	1-459-313-00	COIL WITH CORE (HWC)
L904	1-459-313-00	COIL WITH CORE (HWC)

< TRANSISTOR >

Q902	8-729-900-89	TRANSISTOR DTC144ES
Q906	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q907	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q908	8-729-900-89	TRANSISTOR DTC144ES
Q909	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q910	8-729-119-78	TRANSISTOR 2SC2785-HFE
Q911	8-729-119-76	TRANSISTOR 2SA1175-HFE
Q912	8-729-119-76	TRANSISTOR 2SA1175-HFE

< RESISTOR >

R901	1-215-463-00	METAL	56K	1%	1/4W
R902	1-215-463-00	METAL	56K	1%	1/4W
R903	1-215-449-00	METAL	15K	1%	1/4W
R904	1-215-455-00	METAL	27K	1%	1/4W
R905	1-215-449-00	METAL	15K	1%	1/4W
R906	1-215-469-00	METAL	100K	1%	1/4W
R907	1-215-469-00	METAL	100K	1%	1/4W
R908	1-215-469-00	METAL	100K	1%	1/4W
R909	1-215-473-00	METAL	150K	1%	1/4W
R910	1-215-437-00	METAL	4.7K	1%	1/4W
R911	1-215-453-00	METAL	22K	1%	1/4W
R912	1-215-453-00	METAL	22K	1%	1/4W
R913	1-215-437-00	METAL	4.7K	1%	1/4W



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R914	1-215-453-00	METAL	22K 1% 1/4W	R976	1-215-399-00	METAL	120 1% 1/4W
R915	1-215-435-00	METAL	3.9K 1% 1/4W	R977	1-215-399-00	METAL	120 1% 1/4W
R916	1-215-457-00	METAL	33K 1% 1/4W	R978	1-215-399-00	METAL	120 1% 1/4W
R919	1-215-399-00	METAL	120 1% 1/4W	R979	1-215-399-00	METAL	120 1% 1/4W
R920	1-215-399-00	METAL	120 1% 1/4W	R980	1-215-399-00	METAL	120 1% 1/4W
R921	1-215-399-00	METAL	120 1% 1/4W	R981	1-215-399-00	METAL	120 1% 1/4W
R922	1-215-399-00	METAL	120 1% 1/4W	R982	1-249-431-11	CARBON	15K 5% 1/4W
R923	1-215-441-00	METAL	6.8K 1% 1/4W	R983	1-249-431-11	CARBON	15K 5% 1/4W
R924	1-215-441-00	METAL	6.8K 1% 1/4W	R984	1-214-806-21	METAL	3.9 1% 1/2W
R925	1-215-441-00	METAL	6.8K 1% 1/4W	R985	1-214-806-21	METAL	3.9 1% 1/2W
R926	1-215-463-00	METAL	56K 1% 1/4W	R986	1-214-806-21	METAL	3.9 1% 1/2W
R927	1-215-463-00	METAL	56K 1% 1/4W	R987	1-215-421-00	METAL	1K 1% 1/4W
R928	1-215-461-00	METAL	47K 1% 1/4W	R988	1-215-421-00	METAL	1K 1% 1/4W
R929	1-215-433-00	METAL	3.3K 1% 1/4W	R989	1-215-421-00	METAL	1K 1% 1/4W
R930	1-215-433-00	METAL	3.3K 1% 1/4W	R990	1-215-421-00	METAL	1K 1% 1/4W
R931	1-215-433-00	METAL	3.3K 1% 1/4W	R991	1-215-421-00	METAL	1K 1% 1/4W
R932	1-215-433-00	METAL	3.3K 1% 1/4W	R992	1-215-421-00	METAL	1K 1% 1/4W
R933	1-215-433-00	METAL	3.3K 1% 1/4W	R993	1-249-429-11	CARBON	10K 5% 1/4W
R934	1-215-433-00	METAL	3.3K 1% 1/4W	R994	1-249-429-11	CARBON	10K 5% 1/4W
R935	1-215-439-00	METAL	5.6K 1% 1/4W	R995	1-215-457-00	METAL	33K 1% 1/4W
R936	1-215-439-00	METAL	5.6K 1% 1/4W	R999	1-215-455-00	METAL	27K 1% 1/4W
R937	1-215-439-00	METAL	5.6K 1% 1/4W	R1701	1-249-411-11	CARBON	330 5% 1/4W
R938	1-215-417-00	METAL	680 1% 1/4W	R1702	1-249-427-11	CARBON	6.8K 5% 1/4W
R939	1-215-433-00	METAL	3.3K 1% 1/4W	R1703	1-249-427-11	CARBON	6.8K 5% 1/4W
R940	1-215-429-00	METAL	2.2K 1% 1/4W	R1704	1-249-411-11	CARBON	330 5% 1/4W
R941	1-215-441-00	METAL	6.8K 1% 1/4W	R1705	1-249-411-11	CARBON	330 5% 1/4W
R942	1-215-451-00	METAL	18K 1% 1/4W	R1706	1-249-427-11	CARBON	6.8K 5% 1/4W
R943	1-215-441-00	METAL	6.8K 1% 1/4W	R1707	1-249-411-11	CARBON	330 5% 1/4W
R944	1-215-439-00	METAL	5.6K 1% 1/4W	R1708	1-249-427-11	CARBON	6.8K 5% 1/4W
R945	1-215-445-00	METAL	10K 1% 1/4W	R1709	1-249-427-11	CARBON	6.8K 5% 1/4W
R946	1-215-445-00	METAL	10K 1% 1/4W	R1710	1-249-411-11	CARBON	330 5% 1/4W
R947	1-215-439-00	METAL	5.6K 1% 1/4W	R1711	1-249-411-11	CARBON	330 5% 1/4W
R948	1-215-455-00	METAL	27K 1% 1/4W	R1712	1-249-427-11	CARBON	6.8K 5% 1/4W
R949	1-215-439-00	METAL	5.6K 1% 1/4W	R1713	1-215-886-11	METAL OXIDE	100 5% 2W F
R950	1-215-429-00	METAL	2.2K 1% 1/4W	R1714	1-249-411-11	CARBON	330 5% 1/4W
R951	1-215-429-00	METAL	2.2K 1% 1/4W	R1715	1-249-411-11	CARBON	330 5% 1/4W
R952	1-215-437-00	METAL	4.7K 1% 1/4W	R1716	1-215-886-11	METAL OXIDE	100 5% 2W F
R953	1-215-439-00	METAL	5.6K 1% 1/4W	R1717	1-249-411-11	CARBON	330 5% 1/4W
R954	1-215-439-00	METAL	5.6K 1% 1/4W	R1718	1-249-417-11	CARBON	1K 5% 1/4W
R955	1-215-435-00	METAL	3.9K 1% 1/4W	R1719	1-214-792-00	METAL	1 1% 1/2W
R956	1-215-437-00	METAL	4.7K 1% 1/4W	R1720	1-249-411-11	CARBON	330 5% 1/4W
R957	1-215-441-00	METAL	6.8K 1% 1/4W	R1721	1-249-417-11	CARBON	1K 5% 1/4W
R958	1-215-437-00	METAL	4.7K 1% 1/4W	R1722	1-249-411-11	CARBON	330 5% 1/4W
R959	1-215-439-00	METAL	5.6K 1% 1/4W	R1723	1-249-417-11	CARBON	1K 5% 1/4W
R960	1-215-439-00	METAL	5.6K 1% 1/4W	R1724	1-215-886-11	METAL OXIDE	100 5% 2W F
R961	1-215-439-00	METAL	5.6K 1% 1/4W	R1725	1-215-886-11	METAL OXIDE	100 5% 2W F
R962	1-215-441-00	METAL	6.8K 1% 1/4W	R1726	1-215-886-11	METAL OXIDE	100 5% 2W F
R963	1-215-441-00	METAL	6.8K 1% 1/4W	R1727	1-214-792-00	METAL	1 1% 1/2W
R964	1-215-441-00	METAL	6.8K 1% 1/4W	R1728	1-214-792-00	METAL	1 1% 1/2W
R965	1-215-909-11	METAL OXIDE	47 5% 3W F	R1729	1-214-792-00	METAL	1 1% 1/2W
R966	1-215-469-00	METAL	100K 1% 1/4W	R1730	1-247-807-31	CARBON	100 5% 1/4W
R967	1-215-421-00	METAL	1K 1% 1/4W	R1731	1-249-417-11	CARBON	1K 5% 1/4W
R968	1-215-437-00	METAL	4.7K 1% 1/4W	R1732	1-247-807-31	CARBON	100 5% 1/4W
R969	1-249-421-11	CARBON	2.2K 5% 1/4W	R1733	1-247-807-31	CARBON	100 5% 1/4W
R970	1-215-909-11	METAL OXIDE	47 5% 3W F	R1734	1-247-807-31	CARBON	100 5% 1/4W
R971	1-249-421-11	CARBON	2.2K 5% 1/4W	R1735	1-247-807-31	CARBON	100 5% 1/4W
R972	1-249-431-11	CARBON	15K 5% 1/4W	R1736	1-249-423-11	CARBON	3.3K 5% 1/4W
R973	1-249-431-11	CARBON	15K 5% 1/4W	R1737	1-249-423-11	CARBON	3.3K 5% 1/4W
R974	1-215-399-00	METAL	120 1% 1/4W	R1738	1-249-423-11	CARBON	3.3K 5% 1/4W
R975	1-215-399-00	METAL	120 1% 1/4W	R1739	1-249-423-11	CARBON	3.3K 5% 1/4W

REF.NO.	PART NO.	DESCRIPTION	REMARK			REF.NO.	PART NO.	DESCRIPTION	REMARK		
R1740	1-249-417-11	CARBON	1K	5%	1/4W	R1801	1-215-439-00	METAL	5.6K	1%	1/4W
R1741	1-249-423-11	CARBON	3.3K	5%	1/4W	R1802	1-215-439-00	METAL	5.6K	1%	1/4W
R1742	1-249-423-11	CARBON	3.3K	5%	1/4W	R1803	1-215-439-00	METAL	5.6K	1%	1/4W
R1743	1-249-417-11	CARBON	1K	5%	1/4W	R1805	1-215-439-00	METAL	5.6K	1%	1/4W
R1744	1-249-411-11	CARBON	330	5%	1/4W	R1806	1-247-807-31	CARBON	100	5%	1/4W
R1745	1-247-807-31	CARBON	100	5%	1/4W	R1807	1-247-807-31	CARBON	100	5%	1/4W
R1746	1-214-792-00	METAL	1	1%	1/2W	R1808	1-214-792-00	METAL	1	1%	1/2W
R1747	1-215-886-11	METAL OXIDE	100	5%	2W F	R1809	1-214-792-00	METAL	1	1%	1/2W
R1748	1-215-421-00	METAL	1K	1%	1/4W	R1810	1-214-792-00	METAL	1	1%	1/2W
R1749	1-215-421-00	METAL	1K	1%	1/4W	R1811	1-214-792-00	METAL	1	1%	1/2W
R1750	1-215-421-00	METAL	1K	1%	1/4W	R1812	1-214-792-00	METAL	1	1%	1/2W
R1751	1-215-421-00	METAL	1K	1%	1/4W	R1813	1-214-792-00	METAL	1	1%	1/2W
R1752	1-215-421-00	METAL	1K	1%	1/4W	R1814	1-249-431-11	CARBON	15K	5%	1/4W
R1753	1-215-421-00	METAL	1K	1%	1/4W	R1815	1-247-885-00	CARBON	180K	5%	1/4W
R1754	1-214-792-00	METAL	1	1%	1/2W	R1816	1-249-431-11	CARBON	15K	5%	1/4W
R1755	1-215-469-00	METAL	100K	1%	1/4W	R1817	1-247-885-00	CARBON	180K	5%	1/4W
R1756	1-215-443-00	METAL	8.2K	1%	1/4W	R1818	1-247-807-31	CARBON	100	5%	1/4W
R1757	1-215-437-00	METAL	4.7K	1%	1/4W	R1819	1-215-437-00	METAL	4.7K	1%	1/4W
R1758	1-215-437-00	METAL	4.7K	1%	1/4W	R1820	1-215-437-00	METAL	4.7K	1%	1/4W
R1759	1-247-807-31	CARBON	100	5%	1/4W	R1821	1-215-437-00	METAL	4.7K	1%	1/4W
R1760	1-249-427-11	CARBON	6.8K	5%	1/4W	R1822	1-215-445-00	METAL	10K	1%	1/4W
R1761	1-249-419-11	CARBON	1.5K	5%	1/4W	R1823	1-215-445-00	METAL	10K	1%	1/4W
R1762	1-215-445-00	METAL	10K	1%	1/4W	R1824	1-215-433-00	METAL	3.3K	1%	1/4W
R1763	1-249-427-11	CARBON	6.8K	5%	1/4W	R1825	1-215-433-00	METAL	3.3K	1%	1/4W
R1764	1-249-419-11	CARBON	1.5K	5%	1/4W	R1826	1-215-433-00	METAL	3.3K	1%	1/4W
R1765	1-249-419-11	CARBON	1.5K	5%	1/4W	R1827	1-215-445-00	METAL	10K	1%	1/4W
R1766	1-249-427-11	CARBON	6.8K	5%	1/4W	R1828	1-215-445-00	METAL	10K	1%	1/4W
R1767	1-249-427-11	CARBON	6.8K	5%	1/4W	R1829	1-249-434-11	CARBON	27K	5%	1/4W
R1768	1-249-439-11	CARBON	68K	5%	1/4W	R1830	1-249-434-11	CARBON	27K	5%	1/4W
R1769	1-215-445-00	METAL	10K	1%	1/4W	R1831	1-247-807-31	CARBON	100	5%	1/4W
R1770	1-247-807-31	CARBON	100	5%	1/4W	R1832	1-215-471-00	METAL	120K	1%	1/4W
R1771	1-247-807-31	CARBON	100	5%	1/4W	R1833	1-215-471-00	METAL	120K	1%	1/4W
R1772	1-215-429-00	METAL	2.2K	1%	1/4W	R1834	1-215-471-00	METAL	120K	1%	1/4W
R1773	1-215-429-00	METAL	2.2K	1%	1/4W	R1835	1-215-437-00	METAL	4.7K	1%	1/4W
R1774	1-215-421-00	METAL	1K	1%	1/4W	R1836	1-215-437-00	METAL	4.7K	1%	1/4W
R1775	1-249-429-11	CARBON	10K	5%	1/4W	R1837	1-215-421-00	METAL	1K	1%	1/4W
R1776	1-215-421-00	METAL	1K	1%	1/4W	R1838	1-249-431-11	CARBON	15K	5%	1/4W
R1777	1-249-423-11	CARBON	3.3K	5%	1/4W	R1839	1-249-431-11	CARBON	15K	5%	1/4W
R1778	1-215-421-00	METAL	1K	1%	1/4W	R1858	1-215-445-00	METAL	10K	1%	1/4W
R1779	1-215-898-11	METAL OXIDE	10K	5%	2W F	R1859	1-215-445-00	METAL	10K	1%	1/4W
R1780	1-214-806-21	METAL	3.9	1%	1/2W	R1860	1-215-397-00	METAL	100	1%	1/4W
R1781	1-214-806-21	METAL	3.9	1%	1/2W	R1861	1-215-453-00	METAL	22K	1%	1/4W
R1782	1-215-898-11	METAL OXIDE	10K	5%	2W F	R1862	1-215-453-00	METAL	22K	1%	1/4W
R1783	1-214-806-21	METAL	3.9	1%	1/2W	R1863	1-215-397-00	METAL	100	1%	1/4W
R1784	1-214-806-21	METAL	3.9	1%	1/2W	R1864	1-215-437-00	METAL	4.7K	1%	1/4W
R1785	1-215-898-11	METAL OXIDE	10K	5%	2W F	R1865	1-215-453-00	METAL	22K	1%	1/4W
R1786	1-214-806-21	METAL	3.9	1%	1/2W	R1866	1-215-453-00	METAL	22K	1%	1/4W
R1787	1-214-806-21	METAL	3.9	1%	1/2W	R1867	1-215-437-00	METAL	4.7K	1%	1/4W
R1788	1-249-433-11	CARBON	22K	5%	1/4W	R1868	1-215-469-00	METAL	100K	1%	1/4W
R1789	1-249-441-11	CARBON	100K	5%	1/4W	R1869	1-215-445-00	METAL	10K	1%	1/4W
R1790	1-249-433-11	CARBON	22K	5%	1/4W	R1870	1-215-445-00	METAL	10K	1%	1/4W
R1791	1-249-429-11	CARBON	10K	5%	1/4W	R1871	1-215-445-00	METAL	10K	1%	1/4W
R1792	1-215-445-00	METAL	10K	1%	1/4W	R1872	1-215-437-00	METAL	4.7K	1%	1/4W
R1793	1-247-807-31	CARBON	100	5%	1/4W	R1873	1-215-437-00	METAL	4.7K	1%	1/4W
R1794	1-215-429-00	METAL	2.2K	1%	1/4W	R1874	1-215-437-00	METAL	4.7K	1%	1/4W
R1795	1-249-433-11	CARBON	22K	5%	1/4W	R1875	1-215-437-00	METAL	4.7K	1%	1/4W
R1796	1-247-807-31	CARBON	100	5%	1/4W	R1876	1-215-437-00	METAL	4.7K	1%	1/4W
R1797	1-249-429-11	CARBON	10K	5%	1/4W	R1877	1-215-437-00	METAL	4.7K	1%	1/4W
R1798	1-249-423-11	CARBON	3.3K	5%	1/4W	R1878	1-215-475-00	METAL	180K	1%	1/4W
R1800	1-247-807-31	CARBON	100	5%	1/4W	R1879	1-215-475-00	METAL	180K	1%	1/4W



REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R1880	1-215-475-00	METAL	180K 1% 1/4W	RV914	1-241-630-11	RES, ADJ, CARBON 10K	
R1882	1-215-445-00	METAL	10K 1% 1/4W	RV915	1-241-630-11	RES, ADJ, CARBON 10K	
R1883	1-215-453-00	METAL	22K 1% 1/4W	RV916	1-241-765-11	RES, ADJ, CARBON 22K	
R1884	1-215-397-00	METAL	100 1% 1/4W	RV917	1-241-765-11	RES, ADJ, CARBON 22K	
R1885	1-215-445-00	METAL	10K 1% 1/4W	RV918	1-241-765-11	RES, ADJ, CARBON 22K	
R1886	1-215-455-00	METAL	27K 1% 1/4W	RV919	1-241-765-11	RES, ADJ, CARBON 22K	
R1887	1-215-397-00	METAL	100 1% 1/4W	RV920	1-241-765-11	RES, ADJ, CARBON 22K	
R1889	1-215-457-00	METAL	33K 1% 1/4W	RV921	1-241-765-11	RES, ADJ, CARBON 22K	
R1890	1-215-449-00	METAL	15K 1% 1/4W	RV922	1-241-765-11	RES, ADJ, CARBON 22K	
R1892	1-215-445-00	METAL	10K 1% 1/4W	RV923	1-241-765-11	RES, ADJ, CARBON 22K	
R1894	1-215-429-00	METAL	2.2K 1% 1/4W	RV924	1-241-765-11	RES, ADJ, CARBON 22K	
R1895	1-215-445-00	METAL	10K 1% 1/4W	RV925	1-241-765-11	RES, ADJ, CARBON 22K	
R1896	1-215-445-00	METAL	10K 1% 1/4W	RV926	1-241-765-11	RES, ADJ, CARBON 22K	
R1897	1-215-445-00	METAL	10K 1% 1/4W	RV927	1-241-765-11	RES, ADJ, CARBON 22K	
R1898	1-215-445-00	METAL	10K 1% 1/4W	RV928	1-241-630-11	RES, ADJ, CARBON 10K	
R1899	1-215-421-00	METAL	1K 1% 1/4W	RV929	1-241-765-11	RES, ADJ, CARBON 22K	
R1900	1-215-429-00	METAL	2.2K 1% 1/4W	RV930	1-241-630-11	RES, ADJ, CARBON 10K	
R1901	1-215-449-00	METAL	15K 1% 1/4W	RV931	1-241-765-11	RES, ADJ, CARBON 22K	
R1902	1-215-445-00	METAL	10K 1% 1/4W	RV932	1-241-765-11	RES, ADJ, CARBON 22K	
R1903	1-215-445-00	METAL	10K 1% 1/4W	RV933	1-241-765-11	RES, ADJ, CARBON 22K	
R1904	1-215-445-00	METAL	10K 1% 1/4W	RV934	1-241-765-11	RES, ADJ, CARBON 22K	
R1905	1-215-445-00	METAL	10K 1% 1/4W	RV935	1-241-765-11	RES, ADJ, CARBON 22K	
R1906	1-215-429-00	METAL	2.2K 1% 1/4W	RV936	1-241-765-11	RES, ADJ, CARBON 22K	
R1907	1-215-445-00	METAL	10K 1% 1/4W	RV937	1-241-630-11	RES, ADJ, CARBON 10K	
R1908	1-215-445-00	METAL	10K 1% 1/4W	RV938	1-241-630-11	RES, ADJ, CARBON 10K	
R1909	1-215-445-00	METAL	10K 1% 1/4W	RV939	1-241-630-11	RES, ADJ, CARBON 10K	
R1910	1-215-445-00	METAL	10K 1% 1/4W	RV940	1-241-765-11	RES, ADJ, CARBON 22K	
R1911	1-215-453-00	METAL	22K 1% 1/4W	RV941	1-241-765-11	RES, ADJ, CARBON 22K	
R1916	1-215-423-00	METAL	1.2K 1% 1/4W	RV942	1-241-765-11	RES, ADJ, CARBON 22K	
R1920	1-215-453-00	METAL	22K 1% 1/4W	RV943	1-241-765-11	RES, ADJ, CARBON 22K	
R1921	1-215-445-00	METAL	10K 1% 1/4W	RV944	1-241-765-11	RES, ADJ, CARBON 22K	
R1922	1-215-445-00	METAL	10K 1% 1/4W	RV945	1-241-765-11	RES, ADJ, CARBON 22K	
R1924	1-215-429-00	METAL	2.2K 1% 1/4W	RV946	1-241-765-11	RES, ADJ, CARBON 22K	
R1925	1-215-429-00	METAL	2.2K 1% 1/4W	RV947	1-241-765-11	RES, ADJ, CARBON 22K	
R1926	1-215-429-00	METAL	2.2K 1% 1/4W	RV948	1-241-765-11	RES, ADJ, CARBON 22K	
R1927	1-215-445-00	METAL	10K 1% 1/4W	RV949	1-241-765-11	RES, ADJ, CARBON 22K	
R1928	1-215-421-00	METAL	1K 1% 1/4W	RV950	1-241-765-11	RES, ADJ, CARBON 22K	
R1929	1-215-445-00	METAL	10K 1% 1/4W	RV951	1-241-765-11	RES, ADJ, CARBON 22K	
R1930	1-215-397-00	METAL	100 1% 1/4W	RV952	1-241-765-11	RES, ADJ, CARBON 22K	
R1931	1-215-397-00	METAL	100 1% 1/4W	RV953	1-241-765-11	RES, ADJ, CARBON 22K	
R1932	1-215-453-00	METAL	22K 1% 1/4W	RV954	1-241-765-11	RES, ADJ, CARBON 22K	
R1933	1-215-453-00	METAL	22K 1% 1/4W	RV955	1-241-765-11	RES, ADJ, CARBON 22K	
R1934	1-215-429-00	METAL	2.2K 1% 1/4W	RV957	1-249-417-11	CARBON 1K 5% 1/4W	
R1935	1-247-881-00	CARBON	120K 5% 1/4W	RV958	1-241-765-11	RES, ADJ, CARBON 22K	
R1937	1-215-445-00	METAL	10K 1% 1/4W	RV959	1-241-765-11	RES, ADJ, CARBON 22K	
< VARIABLE RESISTOR >							
RV901	1-241-765-11	RES, ADJ, CARBON 22K		RV963	1-241-765-11	RES, ADJ, CARBON 22K	
RV902	1-241-765-11	RES, ADJ, CARBON 22K		RV964	1-241-765-11	RES, ADJ, CARBON 22K	
RV903	1-241-765-11	RES, ADJ, CARBON 22K		RV965	1-241-765-11	RES, ADJ, CARBON 22K	
RV904	1-241-765-11	RES, ADJ, CARBON 22K		RV966	1-241-765-11	RES, ADJ, CARBON 22K	
RV905	1-241-765-11	RES, ADJ, CARBON 22K		RV967	1-241-765-11	RES, ADJ, CARBON 22K	
RV906	1-241-765-11	RES, ADJ, CARBON 22K		RV968	1-241-765-11	RES, ADJ, CARBON 22K	
RV907	1-241-765-11	RES, ADJ, CARBON 22K		RV969	1-241-765-11	RES, ADJ, CARBON 22K	
RV908	1-241-765-11	RES, ADJ, CARBON 22K		RV970	1-241-765-11	RES, ADJ, CARBON 22K	
RV909	1-241-765-11	RES, ADJ, CARBON 22K		RV971	1-241-765-11	RES, ADJ, CARBON 22K	
RV910	1-241-765-11	RES, ADJ, CARBON 22K		RV972	1-241-765-11	RES, ADJ, CARBON 22K	
RV911	1-241-628-11	RES, ADJ, CARBON 2.2K		RV973	1-241-765-11	RES, ADJ, CARBON 22K	
RV912	1-241-765-11	RES, ADJ, CARBON 22K		RV974	1-241-765-11	RES, ADJ, CARBON 22K	
RV913	1-241-769-11	RES, ADJ, CARBON 470K		RV975	1-241-765-11	RES, ADJ, CARBON 22K	

REF.NO.	PART NO.	DESCRIPTION	REMARK
RV976	1-241-765-11	RES, ADJ, CARBON 22K	
RV977	1-241-765-11	RES, ADJ, CARBON 22K	
RV978	1-241-765-11	RES, ADJ, CARBON 22K	
RV979	1-241-765-11	RES, ADJ, CARBON 22K	
RV980	1-238-019-11	RES, ADJ, CARBON 47K	
RV981	1-241-765-11	RES, ADJ, CARBON 22K	
RV982	1-241-765-11	RES, ADJ, CARBON 22K	

*A-1642-141-A E2 BOARD, COMPLETE			

< CAPACITOR >			
C1	1-126-103-11	ELECT 470MF	20% 16V
C2	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C3	1-163-031-11	CERAMIC CHIP 0.01MF	50V
C4	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
C5	1-163-237-11	CERAMIC CHIP 27PF	5% 50V
C6	1-163-237-11	CERAMIC CHIP 27PF	5% 50V
C7	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C8	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V
C9	1-163-125-00	CERAMIC CHIP 220PF	5% 50V
C10	1-163-123-00	CERAMIC CHIP 180PF	5% 50V
C11	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
C12	1-163-121-00	CERAMIC CHIP 150PF	5% 50V
C13	1-163-133-00	CERAMIC CHIP 470PF	5% 50V
C14	1-124-903-11	ELECT 1MF	20% 50V
C15	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
C16	1-124-907-11	ELECT 10MF	20% 50V
C17	1-163-037-11	CERAMIC CHIP 0.022MF	10% 25V
C18	1-163-119-00	CERAMIC CHIP 120PF	5% 50V
C19	1-163-001-11	CERAMIC CHIP 220PF	10% 50V
< CONNECTOR >			
CN1	1-573-299-21	CONNECTOR, BOARD TO BOARD 10P	
CN2	*1-568-880-51	PIN, CONNECTOR 5P	
< DIODE >			
D1	8-719-914-43	DIODE DAN202K	
< IC >			
IC1	8-759-521-22	IC TDA4650/V4	
IC2	8-759-140-53	IC MC14053BC	
< COIL >			
L1	1-408-421-00	INDUCTOR 100UH	
L2	1-404-554-11	COIL	
L3	1-404-554-11	COIL	
< TRANSISTOR >			
Q2	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q3	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q4	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
Q5	8-729-120-28	TRANSISTOR 2SC1623-L5L6	
< RESISTOR >			
JR1	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR2	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR3	1-216-296-00	METAL GLAZE 0 5% 1/8W	
JR4	1-216-296-00	METAL GLAZE 0 5% 1/8W	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R2	1-216-041-00	METAL GLAZE 470 5%	1/10W
R3	1-216-041-00	METAL GLAZE 470 5%	1/10W
R4	1-216-001-00	METAL GLAZE 10 5%	1/10W
R5	1-216-033-00	METAL GLAZE 220 5%	1/10W
R6	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R7	1-216-051-00	METAL GLAZE 1.2K 5%	1/10W
R8	1-216-063-00	METAL GLAZE 3.9K 5%	1/10W
R9	1-216-045-00	METAL GLAZE 680 5%	1/10W
R10	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R11	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R12	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R13	1-216-095-00	METAL GLAZE 82K 5%	1/10W
R14	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R16	1-216-037-00	METAL GLAZE 330 5%	1/10W
R17	1-216-055-00	METAL GLAZE 1.8K 5%	1/10W
R18	1-216-037-00	METAL GLAZE 330 5%	1/10W
R19	1-216-049-00	METAL GLAZE 1K 5%	1/10W
R20	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R21	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R22	1-216-073-00	METAL GLAZE 10K 5%	1/10W

*A-1644-054-A VM BOARD, COMPLETE			

4-382-854-11 SCREW (M3X10), P, SW (+)			
< CAPACITOR >			
C1501	1-102-129-00	CERAMIC 0.01MF	10% 50V
C1502	1-126-101-11	ELECT 100MF	20% 16V
C1504	1-108-700-11	MYLAR 0.047MF	10% 200V
C1505	1-124-907-11	ELECT 10MF	20% 50V
C1506	1-108-688-11	MYLAR 0.0047MF	10% 200V
C1507	1-106-367-00	MYLAR 0.01MF	10% 100V
C1508	1-162-318-11	CERAMIC 0.001MF	10% 500V
C1509	1-106-367-00	MYLAR 0.01MF	10% 100V
C1510	1-126-355-11	ELECT 33MF	20% 160V
C1511	1-124-799-11	ELECT 2.2MF	20% 160V
C1512	1-108-704-11	MYLAR 0.1MF	10% 200V
C1513	1-162-318-11	CERAMIC 0.001MF	10% 500V
C1514	1-102-951-00	CERAMIC 15PF	5% 50V
C1515	1-102-959-00	CERAMIC 22PF	5% 50V
C1516	1-102-963-00	CERAMIC 33PF	5% 50V
C1517	1-124-667-11	ELECT 10MF	20% 50V
C1518	1-102-074-00	CERAMIC 0.001MF	10% 50V
C1519	1-108-688-11	MYLAR 0.0047MF	10% 200V
C1520	1-126-803-11	ELECT 47MF	20% 16V
C1521	1-124-907-11	ELECT 10MF	20% 50V
C1551	1-124-122-11	ELECT 100MF	20% 50V
C1552	1-124-122-11	ELECT 100MF	20% 50V
C1553	1-102-824-00	CERAMIC 470PF	5% 50V
C1554	1-102-824-00	CERAMIC 470PF	5% 50V
C1555	1-130-483-00	MYLAR 0.01MF	5% 50V
C1556	1-130-483-00	MYLAR 0.01MF	5% 50V
C1557	1-102-824-00	CERAMIC 470PF	5% 50V
C1558	1-102-824-00	CERAMIC 470PF	5% 50V
C1559	1-102-824-00	CERAMIC 470PF	5% 50V
C1560	1-102-824-00	CERAMIC 470PF	5% 50V
C1561	1-130-483-00	MYLAR 0.01MF	5% 50V
C1562	1-130-483-00	MYLAR 0.01MF	5% 50V
C1563	1-130-483-00	MYLAR 0.01MF	5% 50V



REF.NO.	PART NO.	DESCRIPTION	REMARK
< CONNECTOR >			
V2	*1-564-518-11	PLUG, CONNECTOR 3P	
V22	1-695-300-11	CONNECTOR, BOARD TO BOARD 20P	
< DIODE >			
D1502	8-719-901-33	DIODE 1SS133	
D1503	8-719-901-33	DIODE 1SS133	
D1504	8-719-901-33	DIODE 1SS133	
D1505	8-719-901-33	DIODE 1SS133	
D1506	8-719-901-33	DIODE 1SS133	
D1507	8-719-982-36	DIODE MTZJ-39B	
D1508	8-719-982-36	DIODE MTZJ-39B	
D1509	8-719-901-33	DIODE 1SS133	
< IC >			
IC1551	8-759-145-58	IC UPC4558C	
IC1552	8-759-912-77	IC LM324N	
< COIL >			
L1502	1-408-418-00	INDUCTOR 56UH	
< TRANSISTOR >			
Q1501	8-729-017-05	TRANSISTOR 2SA1837	
Q1502	8-729-017-06	TRANSISTOR 2SC4793	
Q1503	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1504	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1505	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q1506	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1507	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q1508	8-729-142-86	TRANSISTOR 2SC3733	
Q1551	8-729-231-60	TRANSISTOR 2SD1406-YGR	
Q1552	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q1553	8-729-231-60	TRANSISTOR 2SD1406-YGR	
Q1554	8-729-141-83	TRANSISTOR 2SB1094-LK	
Q1555	8-729-231-60	TRANSISTOR 2SD1406-YGR	
Q1556	8-729-141-83	TRANSISTOR 2SB1094-LK	
< RESISTOR >			
R1501	1-249-451-11	CARBON 2.2 5% 1/4W F	
R1502	1-249-414-11	CARBON 560 5% 1/4W F	
R1503	1-247-734-11	CARBON 39 5% 1/2W F	
R1504	1-249-384-11	CARBON 1.8 5% 1/4W F	
R1505	1-247-807-31	CARBON 100 5% 1/4W	
R1506	1-249-419-11	CARBON 1.5K 5% 1/4W	
R1507	1-249-412-11	CARBON 390 5% 1/4W	
R1508	1-249-436-11	CARBON 39K 5% 1/4W	
R1509	1-249-421-11	CARBON 2.2K 5% 1/4W	
R1510	1-249-436-11	CARBON 39K 5% 1/4W	
R1511	1-249-418-11	CARBON 1.2K 5% 1/4W	
R1512	1-249-441-11	CARBON 100K 5% 1/4W	
R1513	1-249-432-11	CARBON 18K 5% 1/4W	
R1514	1-247-807-31	CARBON 100 5% 1/4W	
R1515	1-249-435-11	CARBON 33K 5% 1/4W	
R1517	1-249-417-11	CARBON 1K 5% 1/4W F	
R1519	1-215-916-00	METAL OXIDE 680 5% 3W F	
R1520	1-249-432-11	CARBON 18K 5% 1/4W	
R1521	1-249-414-11	CARBON 560 5% 1/4W	
R1522	1-249-384-11	CARBON 1.8 5% 1/4W F	
R1523	1-249-400-11	CARBON 39 5% 1/4W F	

REF.NO.	PART NO.	DESCRIPTION	REMARK
R1524	1-249-418-11	CARBON 1.2K 5% 1/4W	
R1525	1-249-421-11	CARBON 2.2K 5% 1/4W	
R1526	1-249-426-11	CARBON 5.6K 5% 1/4W	
R1527	1-249-414-11	CARBON 560 5% 1/4W	
R1528	1-249-429-11	CARBON 10K 5% 1/4W	
R1529	1-249-414-11	CARBON 560 5% 1/4W	
R1530	1-216-451-11	METAL OXIDE 120 5% 2W F	
R1531	1-249-423-11	CARBON 3.3K 5% 1/4W	
R1533	1-247-903-00	CARBON 1M 5% 1/4W	
R1534	1-249-423-11	CARBON 3.3K 5% 1/4W	
R1535	1-249-392-11	CARBON 8.2 5% 1/4W F	
R1536	1-249-434-11	CARBON 27K 5% 1/4W	
R1551	1-215-445-00	METAL 10K 1% 1/4W	
R1552	1-215-423-00	METAL 1.2K 1% 1/4W	
R1553	1-249-417-11	CARBON 1K 5% 1/4W	
R1554	1-215-445-00	METAL 10K 1% 1/4W	
R1555	1-215-375-00	METAL 12 1% 1/4W	
R1556	1-215-375-00	METAL 12 1% 1/4W	
R1557	1-215-375-00	METAL 12 1% 1/4W	
R1558	1-215-445-00	METAL 10K 1% 1/4W	
R1559	1-215-445-00	METAL 10K 1% 1/4W	
R1560	1-215-445-00	METAL 10K 1% 1/4W	
R1561	1-215-423-00	METAL 1.2K 1% 1/4W	
R1562	1-215-423-00	METAL 1.2K 1% 1/4W	
R1563	1-215-445-00	METAL 10K 1% 1/4W	
R1564	1-249-417-11	CARBON 1K 5% 1/4W	
R1565	1-215-445-00	METAL 10K 1% 1/4W	
R1566	1-215-375-00	METAL 12 1% 1/4W	
R1567	1-215-375-00	METAL 12 1% 1/4W	
R1568	1-215-375-00	METAL 12 1% 1/4W	
R1569	1-215-445-00	METAL 10K 1% 1/4W	
R1570	1-215-445-00	METAL 10K 1% 1/4W	
R1571	1-249-417-11	CARBON 1K 5% 1/4W	
R1572	1-215-445-00	METAL 10K 1% 1/4W	
R1573	1-215-375-00	METAL 12 1% 1/4W	
R1574	1-215-375-00	METAL 12 1% 1/4W	
R1575	1-215-375-00	METAL 12 1% 1/4W	
R1576	1-215-445-00	METAL 10K 1% 1/4W	
R1577	1-215-445-00	METAL 10K 1% 1/4W	
R1578	1-249-417-11	CARBON 1K 5% 1/4W	
R1579	1-249-417-11	CARBON 1K 5% 1/4W	
R1580	1-249-417-11	CARBON 1K 5% 1/4W	
R1581	1-249-432-11	CARBON 18K 5% 1/4W	
R1582	1-249-432-11	CARBON 18K 5% 1/4W	

*A-1678-079-A N BOARD, COMPLETE			

4-030-359-11 HEAT SINK, H. PIN			
*4-363-146-00 HEAT SINK, V. OUT			
< CAPACITOR >			
C801	1-123-024-21	ELECT 33MF 160V	
C803	1-136-541-11	FILM 1.5MF 5% 200V	
C804	1-108-700-11	MYLAR 0.047MF 10% 200V	
C805	1-102-030-00	CERAMIC 330PF 10% 500V	
C806	1-136-165-00	FILM 0.1MF 5% 50V	
C808	1-126-541-11	ELECT 330MF 20% 25V	
C809	1-124-903-11	ELECT 1MF 20% 50V	
C811	1-124-902-00	ELECT 0.47MF 20% 50V	

REF.NO.	PART NO.	DESCRIPTION			REMARK
C812	1-102-973-00	CERAMIC	100PF	5%	50V
C813	1-102-244-00	CERAMIC	220PF	10%	500V
C814	1-110-364-11	MYLAR	0.1MF	10%	200V
C817	1-126-541-11	ELECT	330MF	20%	25V
C818	1-102-824-00	CERAMIC	470PF	5%	50V
C819	1-124-907-11	ELECT	10MF	20%	50V
C820	1-124-907-11	ELECT	10MF	20%	50V
C821	1-124-907-11	ELECT	10MF	20%	50V
C822	1-104-792-51	ELECT	33MF	20%	16V
C823	1-124-907-11	ELECT	10MF	20%	50V
C831	1-106-220-00	MYLAR	0.1MF	10%	100V
C832	1-124-907-11	ELECT	10MF	20%	50V
C833	1-124-916-11	ELECT	22MF	20%	50V
C834	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C835	1-124-927-11	ELECT	4.7MF	20%	50V
C836	1-164-091-11	CERAMIC	0.0022MF	10%	50V
C837	1-136-169-00	FILM	0.22MF	5%	50V
C838	1-164-091-11	CERAMIC	0.0022MF	10%	50V
C839	1-102-106-00	CERAMIC	100PF	10%	50V
C840	1-136-807-11	FILM	0.018MF	3%	1.6KV
C842	1-130-471-00	MYLAR	0.001MF	5%	50V
C843	1-136-173-00	FILM	0.47MF	5%	50V
C844	1-110-364-11	MYLAR	0.1MF	10%	200V
C850	1-136-169-00	FILM	0.22MF	5%	50V
C851	1-124-907-11	ELECT	10MF	20%	50V
C852	1-124-907-11	ELECT	10MF	20%	50V
C853	1-106-220-00	MYLAR	0.1MF	10%	100V
C854	1-126-329-11	ELECT	470MF	20%	50V
C855	1-126-804-11	ELECT	100MF	20%	50V
C856	1-162-114-00	CERAMIC	0.0047MF	2KV	
C888	1-124-903-11	ELECT	1MF	20%	50V

< DIODE >

D801	8-719-928-08	DIODE ERD28-08S
D802	8-719-302-43	DIODE EL1Z
D805	8-719-901-33	DIODE 1SS133
D806	8-719-109-85	DIODE RD5.1ESB2
D807	8-719-109-85	DIODE RD5.1ESB2
D808	8-719-901-33	DIODE 1SS133
D810	8-719-901-33	DIODE 1SS133
D814	8-719-901-33	DIODE 1SS133
D815	8-719-921-88	DIODE MTZJ-13B
D817	8-719-945-80	DIODE ERC06-15S
D818	8-719-901-33	DIODE 1SS133
D850	8-719-982-07	DIODE MTZJ-3.9A
D851	8-719-903-09	DIODE V30N
D852	8-719-901-33	DIODE 1SS133
D853	8-719-903-09	DIODE V30N

< IC >

IC803	8-759-503-91	IC TL082ACP
IC804	8-759-103-93	IC UPC393C
IC805	8-759-100-75	IC UPC1394C

< COIL >

L802	1-409-570-11	COIL, CHOKE 1.2MMH
L803	1-459-313-00	COIL WITH CORE (HWC)
L804	1-408-421-00	INDUCTOR 100UH
L805	1-424-603-11	COIL, CHOKE 1.05MMH

REF.NO.	PART NO.	DESCRIPTION			REMARK
< CONNECTOR >					
N2	*1-568-880-51	PIN, CONNECTOR 5P			
N4	*1-568-879-11	PIN, CONNECTOR 4P			
N5	*1-568-880-51	PIN, CONNECTOR 5P			
N6	1-508-786-00	PIN, CONNECTOR (5MM PITCH) 2P			
N7	1-508-765-00	PIN, CONNECTOR (5MM PITCH) 3P			
N10	*1-564-511-11	PLUG, CONNECTOR 8P			
N30	1-508-784-00	PIN, CONNECTOR (5MM PITCH) 1P			
N851	*1-506-371-00	PIN, CONNECTOR 2P			
N853	*1-506-371-00	PIN, CONNECTOR 2P			
< NEON LAMP >					
NL801	1-519-237-14	LAMP, NEON			
< TRANSISTOR >					
Q801	8-729-201-62	TRANSISTOR 2SC2555-1			
	4-382-854-11	SCREW (M3X10), P, SW (+) ; Q801			
	4-383-023-01	SPACER, MICA ; Q801			
Q802	8-729-119-80	TRANSISTOR 2SC2688-LK			
	4-373-933-01	SHEET (TRANSISTOR), BN ; Q802			
	4-382-854-11	SCREW (M3X10), P, SW (+) ; Q802			
Q803	8-729-119-76	TRANSISTOR 2SA1175-HFE			
Q804	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q806	8-729-119-80	TRANSISTOR 2SC2688-LK			
Q811	8-729-805-07	TRANSISTOR 2SD1887-CA			
	4-382-854-11	SCREW (M3X10), P, SW (+) ; Q811			
Q812	8-729-804-48	TRANSISTOR 2SC3675			
Q851	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q852	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q853	8-729-823-81	TRANSISTOR 2SC4632LS-CB7			
< RESISTOR >					
R800	1-249-401-11	CARBON	47	5%	1/4W
R801	1-216-378-11	METAL OXIDE	5.6	5%	2W F
R803	1-215-869-11	METAL OXIDE	1K	5%	1W F
R804	1-249-429-11	CARBON	10K	5%	1/4W
R805	1-249-423-11	CARBON	3.3K	5%	1/4W
R806	1-249-425-11	CARBON	4.7K	5%	1/4W
R807	1-249-441-11	CARBON	100K	5%	1/4W
R808	1-249-419-11	CARBON	1.5K	5%	1/4W
R809	1-249-417-11	CARBON	1K	5%	1/4W
R811	1-249-421-11	CARBON	2.2K	5%	1/4W
R812	1-249-420-11	CARBON	1.8K	5%	1/4W F
R813	1-215-921-11	METAL OXIDE	4.7K	5%	3W F
R814	1-249-409-11	CARBON	220	5%	1/4W
R815	1-249-416-11	CARBON	820	5%	1/4W F
R824	1-215-469-00	METAL	100K	1%	1/4W
R825	1-215-453-00	METAL	22K	1%	1/4W
R826	1-214-962-00	METAL	820K	1%	1/4W
R827	1-214-764-00	METAL	30K	1%	1/4W
R828	1-215-455-00	METAL	27K	1%	1/4W
R829	1-215-455-00	METAL	27K	1%	1/4W
R830	1-215-928-11	METAL OXIDE	68K	5%	3W F
R831	1-215-928-11	METAL OXIDE	68K	5%	3W F
R832	1-249-417-11	CARBON	1K	5%	1/4W
R833	1-249-419-11	CARBON	1.5K	5%	1/4W
R834	1-249-419-11	CARBON	1.5K	5%	1/4W
R835	1-215-429-00	METAL	2.2K	1%	1/4W
R836	1-215-435-00	METAL	3.9K	1%	1/4W

shading and marked : are critical
for safety.
Replace only with the part number
specified.

N **ZR** **ZG** **ZB**

REF.NO.	PART NO.	DESCRIPTION	REMARK
R837	1-247-863-91	CARBON 22K 5%	1/4W
R838	1-249-435-11	CARBON 33K 5%	1/4W
R839	1-249-438-11	CARBON 56K 5%	1/4W
R840	1-249-434-11	CARBON 27K 5%	1/4W
R841	1-249-429-11	CARBON 10K 5%	1/4W
R842	1-249-435-11	CARBON 33K 5%	1/4W
R847	1-214-761-00	METAL 22K 1%	1/4W
R848	1-215-429-00	METAL 2.2K 1%	1/4W
R849	1-215-421-00	METAL 1K 1%	1/4W
R850	1-215-429-00	METAL 2.2K 1%	1/4W
R851	1-215-404-00	METAL 200 1%	1/4W
R858	1-249-417-11	CARBON 1K 5%	1/4W
R859	1-249-435-11	CARBON 33K 5%	1/4W
R860	1-249-441-11	CARBON 100K 5%	1/4W
R861	1-249-421-11	CARBON 2.2K 5%	1/4W
R862	1-249-434-11	CARBON 27K 5%	1/4W
R863	1-249-431-11	CARBON 15K 5%	1/4W
R864	1-249-428-11	CARBON 8.2K 5%	1/4W
R865	1-249-440-11	CARBON 82K 5%	1/4W
R866	1-249-436-11	CARBON 39K 5%	1/4W
R867	1-249-437-11	CARBON 47K 5%	1/4W
R868	1-249-428-11	CARBON 8.2K 5%	1/4W
R871	1-249-440-11	CARBON 82K 5%	1/4W
R872	1-249-423-11	CARBON 3.3K 5%	1/4W
R873	1-249-441-11	CARBON 100K 5%	1/4W
R874	1-249-435-11	CARBON 33K 5%	1/4W
R875	1-249-421-11	CARBON 2.2K 5%	1/4W
R876	1-215-426-00	METAL 1.6K 1%	1/4W
R877	1-249-434-11	CARBON 27K 5%	1/4W
R878	1-249-441-11	CARBON 100K 5%	1/4W
R880	1-249-429-11	CARBON 10K 5%	1/4W
R881	1-214-761-00	METAL 22K 1%	1/4W
R884	1-215-894-11	METAL OXIDE 2.2K 5%	2W F
R885	1-249-438-11	CARBON 56K 5%	1/4W
R886	1-249-417-11	CARBON 1K 5%	1/4W
R887	1-215-397-00	METAL 100 1%	1/4W
R888	1-249-410-11	CARBON 270 5%	1/4W
R889	1-249-417-11	CARBON 1K 5%	1/4W
R890	1-249-431-11	CARBON 15K 5%	1/4W
R892	1-249-417-11	CARBON 1K 5%	1/4W F
R893	1-215-453-00	METAL 22K 1%	1/4W
R894	1-249-401-11	CARBON 47 5%	1/4W
R895	1-202-731-00	SOLID 10M 20%	1/2W
R896	1-260-111-11	CARBON 10K 5%	1/2W
R897	1-247-881-00	CARBON 120K 5%	1/4W
R898	1-202-730-00	SOLID 8.2M 10%	1/2W
R899	1-249-429-11	CARBON 10K 5%	1/4W
R903	1-247-735-11	SOLID 47 5%	1/2W
R904	1-215-928-11	METAL OXIDE 68K 5%	3W F
R910	1-249-425-11	CARBON 4.7K 5%	1/4W
< VARIABLE RESISTOR >			
RV901	1-241-765-11	RES, ADJ, CARBON 22K	
RV902	1-241-765-11	RES, ADJ, CARBON 22K	
< SPARK GAP >			
SG801	1-519-422-11	GAP, SPARK	

REF.NO.	PART NO.	DESCRIPTION	REMARK
< TRANSFORMER >			
T801	1-437-078-00	TRANSFORMER, HORIZONTAL DRIVE	
T802	1-437-090-00	HDT	
T803	1-453-121-11	TRANSFORMER ASSY, FLYBACK (NX-2630B4)	

*1-653-061-11 ZR BOARD			

< CAPACITOR >			
C1901	1-162-115-00	CERAMIC 330PF	10% 2KV
C1902	1-162-115-00	CERAMIC 330PF	10% 2KV
< RESISTOR >			
R1901	1-202-822-00	SOLID 2.2K 20%	1/2W
R1902	1-202-822-00	SOLID 2.2K 20%	1/2W
R1903	1-249-414-11	CARBON 560 5%	1/4W
R1904	1-249-414-11	CARBON 560 5%	1/4W
R1905	1-215-888-00	METAL OXIDE 220 5%	2W F
< CONNECTOR >			
ZR1	*1-564-522-11	PLUG, CONNECTOR 7P	
ZR2	*1-564-518-11	PLUG, CONNECTOR 3P	
ZR18	*1-691-292-11	PIN, CONNECTOR (PC BOARD) 3P	

*1-653-062-11 ZG BOARD			

< CAPACITOR >			
C1911	1-162-115-00	CERAMIC 330PF	10% 2KV
C1912	1-162-115-00	CERAMIC 330PF	10% 2KV
< RESISTOR >			
R1911	1-202-822-00	SOLID 2.2K 20%	1/2W
R1912	1-202-822-00	SOLID 2.2K 20%	1/2W
R1913	1-249-414-11	CARBON 560 5%	1/4W
R1914	1-249-414-11	CARBON 560 5%	1/4W
R1915	1-215-888-00	METAL OXIDE 220 5%	2W F
< CONNECTOR >			
ZG2	1-564-523-11	PLUG, CONNECTOR 8P	
ZG19	*1-691-292-11	PIN, CONNECTOR (PC BOARD) 3P	

*1-653-063-11 ZB BOARD			

< CAPACITOR >			
C1921	1-162-115-00	CERAMIC 330PF	10% 2KV
C1922	1-162-115-00	CERAMIC 330PF	10% 2KV
< RESISTOR >			
R1921	1-202-822-00	SOLID 2.2K 20%	1/2W
R1922	1-202-822-00	SOLID 2.2K 20%	1/2W
R1923	1-249-414-11	CARBON 560 5%	1/4W
R1924	1-249-414-11	CARBON 560 5%	1/4W
< CONNECTOR >			
ZB3	1-564-524-11	PLUG, CONNECTOR 9P	

shading and marked : are critical
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Replace only with the part number
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ZB

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
ZB20	*1-691-292-11	PIN, CONNECTOR (PC BOARD) 3P					

MISCELLANEOUS							

	1-241-744-11	RESISTOR ASSY, HIGH-VOLTAGE					
	1-452-032-00	MAGNET, DISK; 10MM Ø					
	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø					
	1-453-108-11	DC BLOCK, HIGH-VOLTAGE					
	1-453-121-11	TRANSFORMER ASSY, FLYBACK (NX-2630B4)					
	1-504-145-11	SPEAKER (12CM)					
	1-559-865-41	LEAD ASSY, HIGH-VOLTAGE					
	1-693-185-11	TUNER (UV916H)					
	1-765-286-11	CORD, POWER					
	8-451-441-11	DEFLECTION YOKE (Y829PA (R,G))					
	8-451-441-21	DEFLECTION YOKE (Y829PAN2 (B))					
V901	8-736-074-05	PICTURE TUBE (SD-279) (07MAB2 (R))					
V902	8-736-072-05	PICTURE TUBE (SD-279) (07MAB2 (G))					
V903	8-736-073-05	PICTURE TUBE (SD-279) (07MAB2 (B))					

ACCESSORIES AND PACKING MATERIALS							

	4-030-895-01	JOINT					
	4-037-938-01	INDIVIDUAL CARTON					
	4-037-939-01	TRAY					
	4-037-940-01	PLATE, TOP					
	4-037-941-01	PLATE, BOTTOM					
	4-037-942-01	CUSHION (UPPER) (ASSY)					
	4-037-943-01	CUSHION (LOWER) (ASSY)					
	4-202-762-11	MANUAL, INSTRUCTION					
		(ENGLISH/SPANISH/PORTUGUESE/SWEDISH)					
	4-388-954-01	BAG, PROTECTION					
REMOTE COMMANDER							

	1-467-264-11	REMOTE COMMANDER (RM-842)					
	9-903-466-11	POCKET COVER (FOR RM-842)					
